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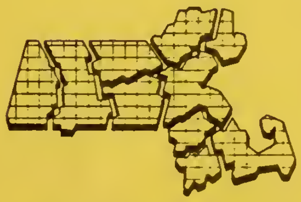

LABOR AREA RESEARCH PUBLICATION

Job Market Research Service ● Massachusetts Division of Employment Security

Annual Planning Report

Fiscal Year 1980

COMMONWEALTH OF MASSACHUSETTS

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I. Highlights and Conclusions

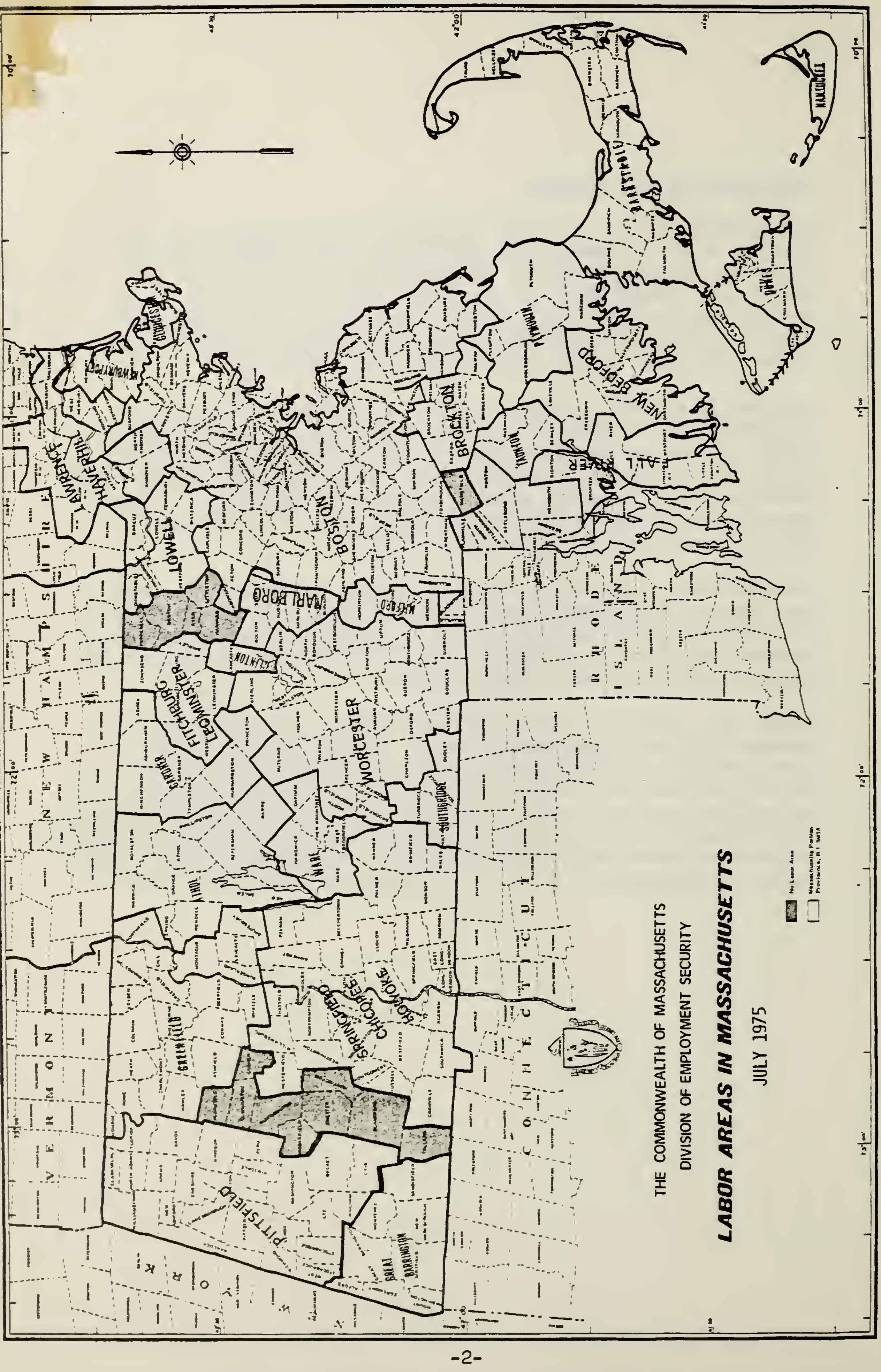
Massachusetts' population is estimated to have grown only by 93,000, or 1.6 percent, from the 1970 census through July 1977. There has been outmigration of nearly 50,000 people from the state, and outmigration of over 40,000 from the state's metropolitan centers to its nonmetropolitan areas. The largest gainers in population are located in the southeastern part of the state: Plymouth County, Cape Cod and the Islands.

The nation appears to have entered a recession, however, this recession is not expected to be as severe as those of 1970 or 1975. In Massachusetts we are not very dependent on automotive production or contract construction, and our high-technology firms are expected to continue growing through the recession. It is therefore anticipated that we will not be as badly impacted by this recession as the nation as a whole.

Manufacturing, especially the high-technology industries, have been growing much faster during the last four years than the rest of nonagricultural employment. It is expected that during the recession manufacturing employment will decline a little while nonmanufacturing will have slight growth.

Since the recession of 1975, Massachusetts has had a dramatic improvement in her unemployment rate. The improvement in the Commonwealth's rate has been greater than that of the nation, or of any of the other ten large industrial states except Michigan. Although the upcoming recession is expected to be comparatively mild, the economy will not generate enough new jobs to absorb the reentrants and new entrants into the labor force. Therefore, a small increase in the unemployment rate is to be anticipated for fiscal 1980.

Chart 1


THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY
LABOR AREAS IN MASSACHUSETTS
JULY 1975
No Labor Area
Massachusetts Portion Providence, R.I. SMSA
PITTSFIELD
GREAT BARRINGTON
GREENFIELD
SPRINGFIELD
CHICOPEE
HOLYOKE
ATHOL
WARE
GARDNER
FITCHBURG
LEOMINSTER
SOUTHBRIDGE
WORCESTER
CLINTON
MARLBORO
MILFORD
LOWELL
BOSTON
LAWRENCE
HAVERHILL
NEWBURYPORT
GLOUCESTER
BROCKTON
TAUNTON
FALL RIVER
NEW BEDFORD
PLYMOUTH
BARNSTABLE
DUKES
NANTUCKET
VERMONT
NEW HAMPSHIRE
NEW YORK
CONNECTICUT
RHODE ISLAND

II. DESCRIPTION OF THE STATE AND LABOR AREAS

a. Massachusetts Labor Areas

The United States Department of Labor Employment and Training Administration has apportioned the Commonwealth of Massachusetts into the following:

Four Standard Metropolitan Statistical Areas (SMSA)

Boston
Brockton
Fitchburg-Leominster
Lawrence-Haverhill

Seven Major Labor Market Areas (LMA)

Fall River
Lowell
New Bedford
Pittsfield
Springfield-Chicopee-Holyoke
Worcester
Massachusetts Portion of the Providence-Pawtucket, R.I. Labor Area

Sixteen Small Labor Market Areas (LMA)

Athol
Barnstable County
Clinton
Dukes
Gardner
Gloucester
Great Barrington
Greenfield
Marlborough
Milford
Nantucket County
Newburyport
Plymouth
Southbridge
Taunton
Ware

and fifteen towns with no labor area attachment which comprise the Balance of State.

A "labor area" consists of a central city or cities and the surrounding territory within commuting distance. It is an economically integrated geographical unit within which workers may readily change jobs without changing their place of residence. Labor areas usually include one or more entire counties, except in New England where towns are considered the major geographical units.

Major labor areas usually have at least one central city with a population of 50,000 or more. In most instances boundaries of major labor areas coincide with those of Standard Metropolitan Statistical areas as determined by the Office of Management and Budget in consultation with a Federal interagency committee.

Geographical boundaries of all classified areas are listed in an Employment and Training Administration publication entitled "Directory of Important Labor Areas". Revision in labor area boundaries are listed monthly in the "Area Trends in Employment and Unemployment" bulletin.

b. Massachusetts CETA Areas by Prime Sponsors

Boston
Brockton
Cambridge
Fall River
Lowell
New Bedford
Springfield
Worcester
Balance of Massachusetts

c. Description of Massachusetts

Massachusetts is located in the Northeastern section of The Continental United States bordered by the states of Vermont and New Hampshire on the north, the Atlantic Ocean on the east, the States of Rhode Island and Connecticut on the south and the state of New York on the west. The state ranks forty-fifth among the states in size with land area of 7,838.68 square miles, according to the Department of Commerce and Development. The climate of the state is favorable to industrial enterprise.

	Boston	Pittsfield	Worcester
Normal Temp. in Jan.	29.9°F	21.8°F	25.9°F
Normal Temp. in July	73.7°F	67.8°F	70.6°F
Normal Annual Precip.	42.8 inch.	44.4 inch.	45.4 inch.

Long renowned for its historical heritage, Massachusetts can claim impressive historical accomplishments aiding intellectual, cultural, and social contributions to the founding and growth of the nation.

Massachusetts has always been a great trading center. Massport, an independent public authority, which was created in the late 1950's has significantly improved the Port of Boston and Logan Airport. Massachusetts' location gives her the "beginning of the line" for foreign shipments. Logan Airport is one hour closer to Europe than any other major airport and The Port of Boston is one day closer than any other seaport on the Eastern Seaboard.

d. Population Characteristics

The total population of Massachusetts grew by 1.6 percent between 1970 and 1977 to 5,782,000, as reported by The Bureau of Census, U. S. Department of Commerce. Massachusetts has had major migration changes between counties since 1970. Table 1 indicates tremendous growth in the southeast region of the state, this factor can be attributed to the change in environments from urban to rural. As can be seen, Essex and Suffolk counties are showing the largest declines because of the lack of desire for the inner city environment.

The total resident population (Table 2) has increased 1.5 percent between 1970 to 1978 to 5,774,000 as reported by The Bureau of Census. This table also indicates, that the number of residents 18 years of age through 64 years, has increased 10.3 percent over this same time period. This factor reflects the importance of job growth that is needed for this state's working age labor force.

Population projections for Fiscal Year 1980 (Table 3) indicate, that there will be a 1.7 percent projected increase in the total population from 1970.

The white 0-15 age group again shows a downward trend, while their non-white counterparts are expected to increase. The 20 to 34 year olds, which indicate the prime working age population, shows large increases in all categories.

e. Civilian Labor Force

The projected civilian labor force are based on the Lawrence/Berkley Laboratory Series. The growth in the labor force which is expected for Fiscal Year 1980, is largely evident in the increase of youth in all categories. The figures show that the 16 to 17 year olds will be entering the labor force at a much faster rate than in the early 1970's. Another factor that is increasing the total labor force growth is the increase of women in the labor force. It will therefor be evident that women will be presenting a challenge to the traditional male oriented jobs.

f. Nonagricultural Wage and Salary Employment

Table 6 provides a review of the Wage and Salary Employment in Nonagricultural Industries from 1970 to 1978. The data is from the findings of the BLS-790 establishment - based employment survey. Between 1977 and 1978, the BLS-790 establishment survey estimated that there were approximately 103,200 positions added to Massachusetts' nonagricultural industries. Over 70 percent of this increase, was recorded among the nonmanufacturing sector. A more detailed overview and forecasting of trends in wage and salary employment by major industrial group appears in Chapter IV. Employment Developments and Outlooks by Industry.

g. Ratio of Manufacturing to Nonagricultural Wage and Salary Employment

The 1978 annual average in manufacturing of 647,300 was 25.9 percent of all nonagricultural wage and salary ; 1977 annual average registered 25.8 percent with 619,100 workers in manufacturing. Nationally, the manufacturing ratio to nonagricultural wage and salary employment for 1978 calculated at 23.7 percent.

h. Largest Industries in Terms of Employment

Manufacturing: Electrical and Nonelectrical Machinery; **Fabricated Metals**

Nonmanufacturing: Transportation and Public Utilities; Wholesale and Retail Trade; Finance Insurance, and Real Estate; Services; and Government

	1978	1977	1976	1970
Fabricated Metals	54.2	52.1	50.4	40.7
Nonelectrical Machinery	86.2	81.6	74.0	74.1
Electrical Machinery	96.9	90.7	83.8	95.2
Contract Construction	74.1	70.6	71.7	100.2
Transportation	116.1	113.8	112.8	117.3
Wholesale & Retail Trade	557.9	534.7	520.2	495.0
Finance, Insurance, Real Estate	142.5	138.6	135.3	129.8
Services	566.9	531.3	508.3	451.2
Government	394.1	387.6	372.5	319.9

Table 1

Estimates of Population
Massachusetts, Counties, Metropolitan and Nonmetropolitan Areas
July 1, 1977 and 1976; April 1, 1970

	July 1, 1977	July 1, 1976	Apr. 1 1970 (Census)	Change, 1970 to 1977		Components of Change, 1970 to 1977			
				Number	Percent	Births	Deaths	Net Migration Number	Net Migration Percent
MASSACHUSETTS	5,782,000	5,791,000	5,689,170	93,000	1.6	544,000	403,000	-48,000	-0.8
Counties									
Barnstable	137,700	132,800	96,656	41,000	42.4	10,200	10,100	41,000	42.4
Berkshire	142,900	146,000	149,402	- 6,500	- 4.4	13,400	11,300	- 8,600	- 5.8
Bristol	467,800	469,300	444,301	23,500	5.3	46,200	33,200	10,500	2.4
Dukes	8,100	7,800	6,117	2,000	32.3	700	700	2,000	32.0
Essex	625,200	627,800	637,887	-12,700	- 2.0	60,100	47,700	-25,100	- 3.9
Franklin	61,900	61,300	59,210	2,700	4.6	6,100	4,900	1,500	2.6
Hampden	458,400	459,600	459,050	- 700	- 0.2	45,200	32,400	-13,500	- 2.9
Hampshire	131,000	133,000	123,981	7,100	5.7	10,300	7,200	4,000	3.2
Middlesex	1,387,900	1,392,000	1,398,397	-10,500	- 0.7	128,900	87,500	-51,900	- 3.7
Nantucket	5,600	5,500	3,774	1,900	49.2	500	400	1,800	47.0
Norfolk	617,700	618,200	604,854	12,800	2.1	49,400	38,800	2,300	0.4
Plymouth	388,900	380,700	333,314	55,600	16.7	40,500	22,400	37,600	11.3
Suffolk	705,500	714,400	735,190	-29,700	- 4.0	69,500	60,200	-39,000	- 5.3
Worcester	643,400	642,900	637,037	6,300	1.0	63,100	46,100	-10,700	- 1.7
Metropolitan	5,568,700	5,583,900	5,523,413	45,300	0.8	526,500	386,800	-94,400	- 1.7
Nonmetropolitan	213,300	207,500	165,757	47,600	28.7	17,500	16,200	46,200	27.0

Source: U. S. Department of Commerce, Bureau of Census, Series P-25, No. 797

Table 2
Estimates of the Resident Population
Massachusetts

	Total Resident Population					Residents 18 - 64 Years			
	July 1, 1978	July 1, 1977	Apr. 1, 1970 Census	Change 1970 to 1978		July 1, 1978	Apr. 1, 1970 Census	Change 1970 to 1978	
				Number	Percent			Number	Percent
UNITED STATES	218,059	216,383	203,235	14,824	7.3	130,628	113,574	17,054	15.0
MASSACHUSETTS	5,774	5,777	5,689	85	1.5	3,506	3,179	327	10.3
California	22,294	21,887	19,953	2,341	11.7	13,807	11,522	2,285	19.8
Florida	8,594	8,466	6,789	1,805	26.6	4,873	3,694	1,179	31.9
Illinois	11,243	11,228	11,114	129	1.2	6,731	6,228	503	8.1
Michigan	9,189	9,148	8,875	314	3.5	5,522	4,873	649	13.3
New Jersey	7,327	7,338	7,168	159	2.2	4,448	4,089	359	8.8
New York	17,748	17,932	18,241	-493	-2.7	10,763	10,444	319	3.1
Ohio	10,749	10,696	10,652	97	0.9	6,465	5,919	546	9.2
Pennsylvania	11,750	11,796	11,794	- 44	-0.4	7,098	6,677	421	6.3
Texas	13,014	12,806	11,197	1,817	16.2	7,708	6,207	1,501	24.2
10 Largest States	117,682	117,074	111,472	6,210	5.6	70,921	62,832	8,089	12.9
Connecticut	3,099	3,107	3,032	67	2.2	1,909	1,723	186	10.8
Maine	1,091	1,084	994	97	9.6	635	535	100	18.7
New Hampshire	871	850	738	133	18.0	520	405	115	28.4
Rhode Island	935	937	950	- 15	- 1.6	559	545	14	2.6
Vermont	487	482	445	42	9.4	287	240	47	19.6
Total New England	12,256	12,238	11,847	409	3.5	7,415	6,628	787	11.9
Northeast	49,081	49,305	49,051	30	0.1	29,724	27,838	1,886	6.8
North Central	58,251	57,969	56,577	1,674	3.0	34,625	31,022	3,603	11.6
South	70,626	69,793	62,798	7,828	12.5	41,849	34,935	6,914	19.8
West	40,100	39,317	34,809	5,271	15.2	24,430	19,779	4,651	23.5

Source: U. S. Department of Commerce, Bureau of Census; Series P.-25, No. 794.

Table 3

Massachusetts Population Composition Projected Change
1970 - 1980

	Population April 1, 1970	Projected Population April 1, 1980	Change 1970 to 1980	
			Number	Percent
Total	5,689,170	5,785,000	95,830	1.7
White Male	2,621,003	2,598,965	- 22,038	- 0.8
0-15	818,388	705,684	-112,704	-13.8
16-17	101,554	110,940	9,386	9.2
18-19	94,567	110,940	16,373	17.3
20-24	203,460	254,407	50,947	25.0
25-34	309,780	324,418	14,638	4.7
35-44	299,288	281,296	- 17,992	- 6.0
45-64	553,720	559,835	6,115	1.1
65+	240,256	251,445	11,189	4.7
White Female	2,863,354	2,889,062	25,708	0.9
0-15	786,308	674,385	-111,923	-14.2
16-17	97,336	108,329	10,993	11.3
18-19	103,082	108,329	5,247	5.1
20-24	232,024	262,517	30,493	13.1
25-34	319,591	383,468	63,877	20.0
35-44	311,648	308,150	-3,498	- 1.1
45-64	629,217	627,060	-2,157	- 0.3
65+	384,148	416,824	32,676	8.5
Nonwhite Male	97,063	137,185	40,185	41.3
0-15	37,808	51,805	13,997	37.0
16-17	3,619	6,460	2,841	78.5
18-19	3,931	6,460	2,529	64.4
20-24	8,402	14,258	5,856	69.7
25-34	13,904	20,224	6,320	45.4
35-44	10,783	13,384	2,601	24.1
45-64	13,394	18,696	5,302	39.6
65+	5,223	5,898	675	12.9
Nonwhite Females	107,750	159,788	52,038	48.3
0-15	37,658	51,104	13,446	35.7
16-17	3,631	6,486	2,855	78.6
18-19	4,337	6,486	2,149	49.5
20-24	10,603	15,536	4,933	46.5
25-34	16,579	27,640	11,061	66.7
35-44	12,394	19,078	6,684	53.9
45-64	15,441	23,594	8,153	52.8
65+	7,107	9,864	2,757	38.8

Table 4
Massachusetts Labor Force Composition Projected Change
1970 - 1980

	April 1, 1970	April 1, 1980	Change 1970 to 1980	
			Number	Percent
Total	2,464,000	2,826,430	362,430	14.7
White Males	1,409,103	1,514,836	105,733	7.5
16-17	46,998	74,509	27,511	58.5
18-19	55,793	81,778	25,985	46.6
20-24	157,449	213,549	56,100	35.6
25-34	292,170	316,284	24,114	8.2
35-44	286,969	275,670	-11,299	- 3.9
45-64	500,579	493,170	- 7,409	- 1.5
65+	69,145	59,876	- 9,269	-13.4
White Females	932,331	1,188,760	256,429	27.5
16-17	40,475	85,770	45,295	111.9
18-19	54,234	75,185	20,951	38.6
20-24	142,197	197,834	55,637	39.1
25-34	137,716	228,852	91,136	66.2
35-44	158,079	191,282	33,203	21.0
45-64	353,830	368,530	14,700	4.2
65+	45,800	41,307	- 4,493	-9.8
Nonwhite Males	42,978	65,590	22,612	52.6
16-17	1,097	2,635	1,538	140.2
18-19	1,877	3,530	1,653	88.1
20-24	6,040	11,847	5,807	96.1
25-34	11,907	18,548	6,641	55.8
35-44	9,415	12,498	3,083	32.7
45-64	11,330	15,305	3,975	35.1
65+	1,312	1,227	- 85	- 6.5
Nonwhite Females	33,258	57,244	23,986	72.1
16-17	978	2,835	1,857	189.9
18-19	1,989	3,553	1,564	78.6
20-24	5,490	8,708	3,218	58.6
25-34	7,999	15,768	7,769	97.1
35-44	6,752	11,334	4,582	67.9
45-64	8,886	13,788	4,902	55.2
65+	1,164	1,258	94	8.1

Table 5
Labor Force, Employment, Unemployment
Massachusetts and the Labor Areas
1978 Annual Averages

	Labor Force	Employment	Unemployment	U. R.
Massachusetts	2,836,000	2,663,000	173,000	6.1
Major Labor Areas				
Boston SMSA	1,366,478	1,286,446	80,032	5.9
Brockton SMSA	80,883	75,717	5,166	6.4
Fall River LMA*	72,978	67,858	5,120	7.0
Lawrence-Haverhill SMSA*	116,629	108,407	8,222	7.0
Lowell LMA	112,465	105,123	7,342	6.5
New Bedford LMA	82,394	75,487	6,907	8.4
Springfield LMA	274,107	259,541	14,566	5.3
Worcester LMA	195,781	186,095	9,685	4.9
Other Labor Areas				
Athol	12,017	11,381	636	5.3
Barnstable	68,430	62,943	5,487	8.0
Clinton	9,061	8,345	716	7.9
Dukes	4,597	4,248	349	7.6
Fitchburg-Leominster	77,328	44,590	2,738	5.8
Gardner	19,968	18,769	1,199	6.0
Gloucester	24,577	22,263	2,314	9.4
Great Barrington	9,210	8,751	459	5.0
Greenfield	26,667	25,176	1,491	5.6
Marlboro	52,689	50,413	2,276	4.3
Milford	20,380	19,254	1,126	5.5
Nantucket	3,536	3,352	184	5.2
Newburyport	16,927	15,581	1,346	8.0
Pittsfield	65,683	61,195	4,488	6.8
Plymouth	35,197	32,006	3,191	9.1
Southbridge	15,928	15,131	797	5.0
Taunton	24,989	23,148	1,841	7.4
Ware	6,675	6,227	448	6.7
Mass Share of R.I.	49,423	46,374	3,049	6.2
Balance of State	20,882	19,503	1,379	6.6

*Massachusetts Portion

Table 6

State of Massachusetts
Nonagricultural Wage and Salary Employment*
By Industry

Annual Average (in Thousands)

	1970	1971	1972	1973	1974	1975	1976	1977	1978
Nonagricultural Total	2,261.7	2,224.2	2,259.8	2,345.7	2,362.6	2,272.4	2,314.4	2,395.7	2,498.9
Manufacturing Total	648.3	600.2	602.5	629.5	632.2	577.8	593.6	619.1	647.3
Durable Goods	334.3	305.2	306.1	333.4	348.3	318.9	325.8	350.7	370.9
Ordnance	20.2	16.8	16.1	17.3	19.6	- #	-	-	-
Lumber & Wood	4.6	4.5	4.7	4.9	4.6	4.4	4.9	5.4	5.8
Furniture & Fixture	10.1	9.7	9.9	10.2	9.9	8.4	8.2	8.4	8.5
Stone, Clay & Glass	12.1	11.6	12.2	13.7	14.5	10.9	12.1	12.3	13.1
Primary Metal	19.8	17.1	17.1	19.4	20.4	15.5	16.1	16.9	17.1
Fabricated Metals	40.7	38.5	40.2	44.1	45.3	49.2	50.4	52.1	54.2
Machinery (Ex. Elec.)	74.1	68.0	68.3	75.9	80.8	74.0	74.0	81.6	86.2
Electrical Machinery	95.2	84.6	83.7	90.7	94.5	82.8	83.8	90.7	96.9
Transportation Equipment	25.3	23.1	21.5	20.5	17.7	30.0#	31.2	33.2	36.8
Instruments	32.2	31.3	32.4	36.7	41.0	43.7	45.1	50.1	52.3

Source: Current Employment Series of The Mass. Div. of Employment Security in Cooperation with The U.S. Dept. of Labor, Bureau of Labor Statistics.

* in Thousands #S.I.C. Conversion

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Table 6
State of Massachusetts
Nonagricultural Wage and Salary Employment*
by Industry

Annual Average (in Thousands)

	1970	1971	1972	1973	1974	1975	1976	1977	1978
Nondurable Goods	314.0	295.0	296.4	296.1	283.9	258.9	267.8	268.4	276.4
Food & Kindered Products	37.1	36.0	35.4	33.7	31.6	28.6	29.5	29.0	30.1
Textile Mill Products	31.2	28.8	29.5	29.6	28.1	25.2	27.7	27.9	28.8
Apparel	49.2	46.9	46.8	46.9	43.4	40.1	43.2	43.0	43.6
Paper & Allied Products	35.1	32.7	32.6	33.5	32.8	27.9	28.9	29.4	30.3
Printing & Publishing	45.0	42.5	43.1	43.7	42.2	40.3	41.0	42.2	43.0
Chemicals & Allied	19.4	18.4	18.0	18.9	19.5	19.8	18.4	17.3	17.5
Rubber & Plastic Prods.	33.6	31.3	33.0	35.3	34.4	27.8	29.6	30.0	31.0
Leather & Leather Prods.	35.9	31.8	30.6	27.2	24.4	23.0	24.1	22.7	22.8
Other Nondurable Goods	27.4	26.6	27.4	28.3	27.5	25.2	25.4	26.9	29.3

Source: Current Employment Series of The Mass. Div. of Employment Security in Cooperation with The U. S. Dept. of Labor, Bureau of Labor Statistics.

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Table 6
State of Massachusetts
Nonagricultural Wage and Salary Employment*
By Industry

Annual Average (in Thousands)

	1970	1971	1972	1973	1974	1975	1976	1977	1978
Nonmanufacturing	1,613.4	1,624.0	1,658.4	1,716.4	1,730.4	1,694.8	1,720.8	1,776.6	1,851.6
Contract Construction	100.2	102.5	107.2	107.9	96.8	79.8	71.7	70.6	74.1
Trans., Comm., & Public Utilities	117.3	117.0	121.4	123.4	123.1	113.7	112.8	113.8	116.1
Wholesale & Retail Trade	495.0	500.4	504.0	519.5	523.5	511.8	520.2	534.7	557.9
Finance, Ins., Real Estate	129.8	130.2	131.6	136.6	138.7	135.1	135.3	138.6	142.5
Services, Mining, Misc.	451.2	443.3	451.1	477.4	494.0	489.1	508.3	531.3	566.9
Government	319.9	330.6	343.1	351.6	354.3	365.3	372.5	387.6	394.1
Federal	65.0	62.3	64.4	61.9	58.2	58.0	57.8	56.8	56.7
State & Local	254.9	268.3	278.7	289.7	296.1	307.1	314.7	330.8	337.4

Source: Current Employment Series of The Mass. Div. of Employment Security in Cooperation with The U.S. Dept. of Labor, Bureau of Labor Statistics.

* in Thousands

III. Economic Development and Outlook Through Fiscal Year 1980

a. Economic Outlook for the United States

During the past few decades, Massachusetts' economy has not followed national trends consistently. In the early sixties the state experienced lower unemployment than did the country, while the 1973-1976 recession was much worse here than nationally. In the past two years, Massachusetts has emerged from that recession which many considered to be the worst economic slowdown since the 1930's. Now economists are predicting that we are entering another recession, although there isn't general agreement as to when the recession will start or how long and severe it will be. It seems useful to review the U. S. economy because it does have a substantial impact on the Commonwealth and then to project the Massachusetts outlook through FY 1980.

In constant 1972 dollars, the Gross National Product (GNP) rose from an annual rate of $1,354.5 billion in the fourth quarter of 1977 to $1,413.0 billion in the fourth quarter of 1978, an increase of 4.3 percent. There was slow growth in the third quarter of the calendar year, and a slight decrease in the first, but these were offset by strong expansion in the second and fourth quarters which had annual growth averages of 8.4 and 6.2 percent respectively. During the first quarter of 1979, there has been little growth nationally, partially due to the unusually cold temperatures and heavy snowfalls experienced by the Prairie and Middle Western states. In April, weather continued to have an inhibiting effect on the economy with lost property and production time caused by the heavy rains and flood conditions through much of the South and along the Red River.

In January 1979, the Labor Department reported that there were 18 percent fewer job openings available at the 161 local job banks surveyed than there were a year before. This was the fourth straight month that this has occurred. February saw the Conference Board's index of help wanted advertising decline by about two percent, following a drop of 2.5 percent in January. Retail sales figures, adjusted for inflation, decreased during the first quarter of 1979. This is significant because high consumer spending was a major cause of growth during 1978. None of these factors are conclusive, but they are indicators that the economy is slowing down. Some would say that a slowdown is not only inevitable, but necessary in order to control inflation. From the Administration's point of view, if a mild recession is inevitable, it would be better to have it in 1979, and hopefully over within 1980. Thus the Administration has moved for economic restraint: most significantly, the budget proposals with the aim of balancing the Federal budget in 1981, and the deregulation of domestic oil starting in 1979. They hope that their policies will mean the expected recession would occur sooner rather than later, and produce an earlier end to rapidly increasing prices and high interest rates. Most indicators show that there will be a mild recession, at least during the last half of 1979, possibly extending into early 1980. Data Resources in its April 1979 Review forecast that the economy's real growth, after inflation factors are removed, would decline in the third and fourth quarters of 1979, and start expanding in the beginning of 1980. The first quarter of 1979 showed annual growth of only 7 tenths of a percent; so the economy would have to expand at a rate of 3.8 percent for the rest of the year (which is unlikely to occur) to achieve even a 3 percent growth for the year. Therefore, if D.R.I.'s projections as to when the economy will decline d when it will again expand are correct, the nation should show very little eal growth this year, perhaps none. D.R.I. expects expansion of 2.3 percent n 1980, but their growth estimate could be an underestimate if the economy rebounds as well as some other economists expect, and as the Administration hopes, it will.

Inflation is, unfortunately, not a new problem. The Consumer Price Index rose 6.1 percent in 1969, more than twice the increase of 1967. In 1971-1972 the C.P.I. rose only 3.4 percent each year, but then increased to 12.2 percent in 1974, largely because of the oil crisis. By 1976 the increase was a more manageable 4.8, but 1977 and 1978 registered rates of 6.8 and 9.0 respectively. Looking at 1978 by quarters, the annual rates of growth were 8.9, 10.7, 8.5, and 8.5 (again in the last three months of the year). The Administration hoped to keep inflation down in 1979 by a 7 percent voluntary limit on wage and price increases, and a 9 percent ceiling on hospital rate increases; unfortunately, it has not been successful. On April 26, the Government announced that the C.P.I. increased during the first quarter by an annual rate of 13 percent. The 1.1 percent jump in February followed by another 1.0 in March all but ended any chance of keeping inflation within the Government's 7.4 percent forecast for the year.

Energy makes up one tenth of the C.P.I. Index, yet the price of imported oil, which is approximately half of the oil that is used in the United States, is beyond our Government's power to regulate. Houses and used cars are sold on an individual basis and also can't effectively be regulated. About two-thirds of the items that comprises the C.P.I. are uncontrolled by the Administration's guidelines. These variables have contributed the most to the latest increase. While the Urban Consumer's Index level of 209.3 for March 1979 was 10.3 percent higher than the 189.7 recorded in March 1978, housing prices were up by 10.6 percent, and food and gasoline rose 12.5 and 16.5 percent. Even apparel, which during 1978 rose at about half the overall C.P.I. rate, increased 1.6 percent in March 1979. Mr. Kahn, President Carter's chief advisor on inflation, in announcing the first quarter's price increases, predicted price increases in the second quarter. He conceded that the Administration's 7.4 percent inflation forecast for 1979 is now too low. However, he stated that in the last half of the year, the inflation rate will be more like what they had been hoping for the entire year, and lower still in 1980.

There will be modest increase in the unemployment rate should the recession be mild, and there not be massive layoffs. There won't be enough jobs to absorb the new entrants and re-entrants into the labor force. However, it's possible that employment will also rise, although at a much lower rate than th numbers of unemployed. There is usually a little lag time between improvemen in the economy and a decrease in the unemployment rate. This is because empyers will wait until their employees are back to working at full production capity before they take on additional workers. Therefore, while the last quarter o 1979 or the first quarter of 1980 may experience the start of the recovery, t unemployment rate should be about a tenth worse than it was during 1978. It y well increase to about 6.6 percent during the first or second quarter of 198

Real Disposable Income rose 4.3 percent in 1978. If there is a recess, disposable income will not rise as quickly in 1979 or in 1980. The trend ring 1978 was for savings to rise faster than disposable income. Should this S. consumer spending may only rise at rates of 2 to 3 percent during the nexthen years. Increased deposits at banks should help long-term capital spending industry, and the housing market; neither of which, however, should show pa ular strength during the latter half of 1979. As it stands now, housing sta were very low in January and February, and though they did increase in March, the three months were below the pace of the first quarter of 1978. Housing s for all of 1979 may only be in the range of 1.5 million. With more money ava able at banks, and hopefully lower interest rates, houses could be built at a annual rate of 2 million during the last half of 1980.

The forecast that the national economy will experience a recession, that is tw successive quarters of decline, is by no means unquestioned. A recession forec assumes that the Federal Government will keep its spending down, that interest rates will remain high or go even higher, that inflation will continue and caus cuts in consumption, and that inventory levels will stabilize or at least their growth rates will decline. To date, these four assumptions appear to be what's happening. However, should the Administration's wage and price guidelines program have an effect, and should the dollar strengthen, our inflation rate would decline. Higher capital investment is also possible because some industries are currently producing near their capacities due to very low investment in the middl 1970's. A recession will perhaps be avoided, and the economy could merely grow at a slow rate.

b. Economic Outlook for Massachusetts

The projections for the Commonwealth's economy for the next two fiscal years are based on the April 1979 forecast of the state funded Massachusetts Economic Polic Analysis (MEPA) Model done by George I. Treyz and Roy E. Williams at the University of Massachusetts, Amherst Campus. The M.E.P.A. model for Massachusetts is "driven" by the national forcasting model of Data Resources Inc., Lexington, Massachusetts. Any adjustment to the M.E.P.A. model forecast, the tables from which are included in the appendix, has been done by the Labor Area Research Department, Massachusetts Division of Employment Security. The department has also provided the supplemental information not included in the forecast. (Fiscal

Year 1979 covers the October 1978 to September 1979 period, and fiscal 1980 covers the period from October 1979 to September 1980.)

Total nonagricultural employment, which grew by 4.3 percent in fiscal 1978, is expected to continue its growth during fiscal 1979 and 1980, at rates of 3.6 and 0.5 percent respectively. In 1979 there is expected to be employment growth in the first two quarters of the calendar year, followed by two quarters of slight decline, with expansion beginning again in calendar 1980. The M.E.P.A. model predicts that the anticipated recession will be less severe here in Massachusetts than nationally (a nice change from 1975 - 1977) due to our lesser dependence on construction and automobile production, and our improved competitive position caused by the less rapid increase of wages here since 1972 than has occurred nationally.

Manufacturing employment grew faster in fiscal 1978 than did total nonagricultural employment, due to a 6.2 percent growth in durable goods employment, a sector which is expected to expand an additional 4.8 percent in fiscal 1979 before falling back six-tenths of a point in fiscal 1980. Nondurable goods also expanded in 1978, by 2.8 percentage points, and in fiscal 1979 and 1980 its anticipated to go up by 2.1 and decline by 1.7 percent respectively. An interesting observation is that the Commonwealth's share of total U. S. manufacturing employment is to continue its increase. This is due not to any massive expansion, but rather the feeling that employment will not suffer as much here as elsewhere during the recession. Most of what Massachusetts manufacturers produce, particularly among the durable goods, is exported from the state. Should the national recession be more severe and long lasting than is now anticipated, manufacturing employment here would be greatly effected due to reduction in purchasing throughout the U. S.

Personal income in the state is anticipated to rise by 12.0 and 10.6 percent in calendar 1979 and 1980. Relative to the U. S. using 1973 as a base, the disposable income index here will be 103.3 for 1979, and 102.9 the year following.

Inflation will continue to be a serious concern for the Commonwealth's citizens, although it appears we are marginally better off than people elsewhere. Price rises of 8.7 and 8.1 percent are expected for Massachusetts in calendar 1979 and 1980, which will be at 97.7 and 96.9 percent of the national rates. Since it is already more expensive to live here than most places (the Federal Commerce Department ranks Boston as the most expensive continental U. S. city in which to live), our lesser rates of inflation could just mean a leveling of costs nationwide closer to a common average.

Housing and Capital Investment should follow general national trends. Particularly for housing, there is a great deal of unmet demand. Because of a possible recession, however, we shouldn't expect a great increase in the number of new housing starts until late calendar 1980, or until 1981.

Massachusetts has enjoyed better than national improvement in her unemployment rate in recent years. During some months of 1978 the rate here was estimated to be under the national average. Our unemployment rate will rise in the coming year as employment levels stabilize while people continue to enter the labor force. The M.E.P.A. model forecasts that both the state and national unemployment rates will be 5.9 percent for fiscal 1979, and 6.5 percent for fiscal 1980. The unemployment predictions may be slightly low and high respectively, depending on the timing and severity of the recession. Massachusetts, despite its very high labor force participation rate, is not expected to experience unemployment any worse than the country as a whole. If this prediction is realized, with our very high labor force participation, the Commonwealth's employed to population ratio will remain well above the national average.

Energy and World Conditions are two interrelated sectors in which changes could greatly affect the state, and over which we unfortunately have very limited control. Bay State goods are sold worldwide, everything from small computers to jet engines. Changes in economic conditions or governments abroad could have an impact on orders for our products, or perhaps worse, cut off our access to the raw materials needed to make them. It's difficult to anticipate a plan for such changes, but their possibility should be kept in mind.

One commodity from abroad, oil, was cut off in 1973 - 1974, and it's now over five times more expensive than at the beginning of the decade. This is a worldwide problem, not just local. In a state dependent on oil for heat as well as electricity, we are particularly impacted. Consumers in the Commonwealth use over 2 billion gallons of #2 home heating oil a year. Every increase of a penny in the oil's price, costs consumers here over $20 million. The average increase of 1.66 cents a gallon in the price of #2 fuel oil, which occurred from April 13 - 30, 1979, on an annual basis will cost the Commonwealth's consumers an additional $33.8 millio Also of concern to Massachusetts are the increases in automobile gasoline prices and the nearly two billion gallons of heavy oil used by industry and institutions. With domestic oil price deregulation and the latest OPEC increase, some estimate that the oil could go up as much as 20 cents a gallon within the year. On a trip to New Hampshire in April, President Carter pledged that there will be no shortage of heating oil next winter, even if he has to force the oil companies to refine it at the expense of gasoline production. Also, most of the oil we use here comes from overseas, so domestic deregulation will hurt many other states worse than us. We can thus expect that our comparative energy costs will not significantly worsen in relation to other states, at least as far as oil is concerned. Proposed gasoline rationing, however, could severely hurt our tourist industry.

Most of the electricity used in Massachusetts is generated from burning oil or from nuclear plants. It is now questionable that nuclear energy will be the power source chosen in the 1980's for new electric generating plants in this area due to high construction costs and environmental and safety concerns underscored by the recent events at the Three Mile Island Plant in Pennsylvania. Boston Edison is changing some of its generating capacity from oil to gas, and Fall River Electric over the next few years will be converting its major plant from oil to coal. While both gas and coal prices will also increase, in the long term their prices should be more stable, and their availability more sure, than in the case for oil. In the long and the short term, however, energy will continue to be a major concern, particularly for such an energy-resource poor state as Massachusetts. Because Massachusetts durable goods manufacturing employment is interdependent on the import of raw materials and the export of finished goods, increased costs of transportation and pending shortage of diesel fuel may have an impact on employment levels in this sector.

IV. State Employment Projections and Review by Industry

Figures released by the U. S. Department of Commerce for April, 1979, showed that the index of economic indicators decreased 3.3 percent nationwide during the month. Part of this decline was caused by a trucking strike, but most of it is due to a drop in the amount of new orders for goods. Orders for capital goods used in non-defense industries for production of other goods were down 13.6 percent, new orders for durable goods were 8.7 percent lower than in March. This was the largest monthly drop in over eleven years. Many economists feel that after a sluggish first quarter, April's figures make virtually certain that the nation is entering a recession, or at least an economic plateau, or that the nation is already in recession. In light of this, we will now discuss Massachusetts' employment prospects by industry.

As previously stated, a recession would be less severe here than nationally due to our industrial mix; specifically, the Massachusetts economy is less dependent on construction and the automotive industry than is the country as a whole. The state's economy since 1975 has shown its greatest employment growth in manufacturing (especially durable goods manufacturing), wholesale and retail trade, services, and local government. While none of these sectors can be expected to have great expansion during a recession, services and some industries in the durable goods sector should experience significant growth.

During the last four years Massachusetts' employment growth has disproportionally occurred in the high-technology industries. (1) In fact, from 1975 to 1977, employment in high-technology firms had a growth rate 3.2 times that of the rest of the state's manufacturers, and three times faster than subject employment as a whole. Since high-technology firms to a large degree manufacture computers, instruments, or defense-related material, this sector should continue to show strength.

The cost of mini-computers has tended to decrease even as their capabilities increase. So despite a national recession, the cost/value of mini-computers will remain attractive. The domestic market has not reached the saturation point, and there are growing overseas markets. During fiscal years 1977 and 1978, Massachusetts received 5.3 and 5.2 percent respectively of the prime contracts awarded nationally by the Department of Defense. The Carter Administration has committed itself to a three percent increase in real terms in defense appropriations during each of the next several years. As most of the future growth in defense contracts is expected to be in electronics, Massachusetts may even increase her share of prime contracts awarded.

An analysis of high technology industries from 1975 to 1977 shows interesting variations in employment and average wage growth rates. Annual wages, and wage growth, tend to be highest in those industries which have occupational profiles which indicate that more than 35 percent of the industry's total employment is in professional, managerial and technical occupations. These industries employ significant numbers of engineers, systems analysts, and technicians - occupations requiring advanced training and higher education. Among these industries, the communications equipment group (SIC 366) and the guided missiles system group (SIC 376) receive significant numbers of government prime contracts.

The industry groups which showed the highest percentages of growth and total increase in employment are those which produce products which are essential to the conduct of modern business enterprise - office computing equipment (SIC 357), modern manufacturing - electronic components and accessories (SIC 367), and human safety needs - medical instruments and supplies (SIC 384). In general, those industries among the high-techs. which showed the highest employment increase from 1975 to 1977 were groups which had lower wage increases than the high-technology industry as a whole. This is due to these firms having larger percentages of assemblers and other lesser paid production and service workers than the firms which do greater amounts of research and development. This has permitted the absorption of individuals displaced by the exodus of declining industries.

That there is a growing scarcity of these needed professional and technical workers has been the greatest factor in their relative increase in wages, and unfortunately is becoming an inhibiting factor to the growth of the high-technology group. Massachusetts is in competition with other states and nations for the trained personnel needed by these companies. Below is a chart showing our growth relative to the U. S., and to two of our largest competitors, Texas and California, for the years 1975 through 1977.

Percent Changes in Employment 1975 - 1977

	High-Tech. Manufacturing	Total Manufacturing	Total Subject Employment
U.S.	10.7	6.6	6.6
Mass.	13.8	7.0	4.6
Calif.	10.3	9.2	14.1
Texas.	20.4	11.1	11.9

The chart shows that even though the Commonwealth lagged behind the nation in employment growth, manufacturing employment growth, driven by high-tech. growth, was above the national average. Although Texas had a greater percentage growth than the Bay State, in absolute numbers more new high-tech jobs were created here.

Because of her human and capital resources, Massachusetts has more than held her own. However, it is more expensive to do business here than in many other states, and the high cost of living here makes it difficult to recruit people to move here. But these are not problems that the Commonwealth faces alone. Costs of doing business, and the cost of living, are rising elsewhere, usually faster than here, and other areas are also having recruiting problems. North Carolina firms have been advertising for skilled people in the Boston newspapers, and an economist from North Texas State University has stated that some Dallas area firms have found it necessary to fly in people from California to work weekend shifts. In the long run, we can expect that high-tech firms will continue to find Massachusetts an attractive location because of the types of other firms here, the characteristics of the labor force, educational resources, and the availability of public transportation (in an energy-conscious society). Professional and skilled personnel are, and in the short run will remain, in short supply all over the country. However, these same firms may transfer the production end of their business elsewhere, often abroad, when and as the production of their goods is streamlined enough not to need the highly skilled worker found here. Due to the increased cost of fuel and instability in the availability of oil, increased costs of transportation by air, sea, and over-the-road, may partially offset, in the long run, the savings attributable to cheaper labor available outside the Commonwealth.

Total nonagricultural employment and manufacturing employment should increase slightly through the end of fiscal 1979; however, manufacturing will have a slight downturn during the course of the recession.

Summarizing manufacturing trends briefly:

-lumber (SIC 24): will decline slightly, because of the dirth in new housing construction.

-furniture (SIC 25) slight increase due to the manufacture of office furniture, which should be fairly strong, if small sector.

-stone, clay, etc (SIC 32) will be effected by the passage of a bottle bill, but there doesn't seem to be agreement whether it would be good or bad for employment in the industry.

-primary metals (SIC 33): no significant changes

-fabricated metals (SIC 34): rising costs of raw materials and transportation, and increased automation, will cause a decline in employment starting next year.

-nonelectrical machinery (SIC 35): there has been a decline nationally in orders for durable goods, but this industry contains the mini-computer firms which are expected to show continued strong growth.

-electrical machinery (SIC 36): a small decline is projected, with renewed growth after the recession.

-transportation equipment (SIC 37): Defense Department contracts should stabilize most employment in this industry. However, the Quincy shipyard faces layoffs this coming Fall if new orders for ships aren't secured by then.

-instruments (SIC 38): the Treyz model projects a modest decline. Polaroid recently laid off 800. However, the long term prospects for this industry, particularly for medical instruments, are very good.

-food and kindred (SIC 20): employment should remain stable. Fish processing could show a large percentage increase, but total employment in that sector is under 3,000.

-textiles (SIC 22): the Geneva Trade Agreement is supposed to maintain the status quo as far as imports are concerned. Growth in employment in this industry has been shown by firms which manufacture upholstery materials for auto and home furnishings. The depth of the recession is a crucial factor here, because a long term reduction in auto purchases could lead to layoffs. A short recession shouldn't have much effect.

-apparel (SIC 23): at present there doesn't appear to be a dirth of new orders, but, the reduced consumer spending which occurs during economic slowdowns could have a ripple effect. An additional problem this industry faces is that many of its workers are reaching retirement age, and not enough young people appear to be interested in this kind of work to maintain employment levels in the long term.

-paper & paper products (SIC 26): paper products generally are highly sensitive to changes in the national economy, so with a national recession we can expect at least slightly lowered employment levels. A factor which could perhaps partially offset the national trend is the new Post Office regulations standardizing the sizes of materials accepted for mailing. While this standardization could increase production in the short term, it could lead to increased automation in the long term, and a reduction in the work force.

-printing and publishing (SIC 27): an overall increase in employment. The growing demand for the printed word is being offset by increased automation made possible by new technology. New printing and editing processes produced by Compugraphic (SIC 35), whose employment is booming, reduce the need for highly paid printers.

-chemicals (SIC 28): a small decline is expected. The cost and availability of petrochemicals may effect the plastics and synthetic resins sector (SIC 282).

-rubber and plastics (SIC 30): the decline predicted by the model appears reasonable. The recession will mean less demand from the automobile industry, and the rising cost and availability of petrochemicals will also hurt this industry.

-leather (SIC 31) a decline is predicted. Claims for unemployment benefits from workers in this industry have already gone up. The increase in leather's cost will effect consumer spending, at least until after the recession. The availability of raw hide will be a critical factor for this industry. One bright note, many Massachusetts shoe manufacturers are beginning to compete successfully on the European market.

Nonmanufacturing employment has not had as impressive a rate of growth as manufacturing over the last three years, but overall it is expected to weather the coming recession better.

Summarizing trends by sector:

-contract construction: normally one would expect construction to be adversely effected during an economic slowdown. However, because of demand for office, hotel, and industrial space, coupled with the assumption that the recession will be mild, no yearly decline in employment is expected for this industry. By the end of this year, Boston is expected to have a shortage of office space. Although only one new office tower is presently under construction downtown, announcement for additional buildings are expected. Hotel rooms are also expected to become scarcer, as Boston's convention business increases. Presently, nearly a score of new hotels are being proposed, at least half of which will be built. Large scale projects for office, hotel, and retail space have been announced for Copley Square and on Washington Street, although work has not yet started on either. Statewide, renovation of older buildings for residential or commercial purposes is becoming increasingly popular, partially because it's usually cheaper than new construction. Many manufacturing firms have announced that they will construct additions to their existing plants. Federal grants have been awarded for the expansion or upgrading of rail and subway lines, and for water treatment facilities. The one weak area in the construction sector is housing. Due to high labor and materials prices, and very high interest rates, constructing a single family residence has become too expensive for most people. Construction of multi-unit dwellings, and renovation of older buildings, should account for most new residential units this year.

Because the trucks which bring in the building materials, and most heavy construction equipment, are run by diesel fuel, this industry could be adversely impacted by the fuel crisis.

-transportation, communication, and utilities: a slight decline is forecast. Utilities (SIC 49) should hold their own or increase slightly, while Communications (SIC 48) should continue the decline it has experienced since 1975 due to increased automation. Because of the fuel shortage, public transportation employment can be expected to increase. Air transport (SIC 45) may experience some significant employment increases, especially since Braniff Airlines has announced that it will use Boston as its European gateway city. However, this is not a particularly large industry to begine with (8,000 workers in 1977), although it is comparatively well paying.

-wholesale and retail trade: increased employment is expected, but at a much lower level of growth than in the past few years. Most of the growth can be expected in the relatively low paying jobs in the retail trade sector, with fairly little growth in the better paying wholesale trade industries.

-finance, insurance, and real estate: banking (SIC 60) and insurance (SIC 63) should account for most of the moderate growth in this sector. Real estate employment may not increase by much, but wages industry-wide should experience an above average increase because of large agents' commissions on the rapidly increasing housing prices.

-services: overall, there should be an increase in employment, although it won't be shared by all the industries. For example, business services (SIC 73) should continue its five year period of growth, while personal services (SIC 72) may well stabilize or go down. Hotels (SIC 70) and amusements (SIC 79) are expected to increase on a yearly basis, although much of this employment is either seasonal, part-time, or both. Also, both of these last two mentioned industries could be badly hurt if there is a severe gasoline shortage. Health and social services (SIC 80 and 83) are expected to have small increases in employment next year. Educational services (SIC 82) will most likely decline, however, the extent of the decline can't yet be estimated because it is dependent on city and town spending, and the impact of the end of the "baby boom" on individual communities.

-government: Federal and state employment are expected to remain virtually the same through fiscal 1979, increasing slightly in fiscal 1980. Both employment rolls, however, will perhaps see declines due to attempts to balance the Federal budget and keep increases in state expenditures below the increase of inflation. The "tax - cap", or rather the 4 percent limit on increases in expenditures, which passed the state legislature will probably lead to lower local government employment (although there may be a lag on the legislation's impact).

(1) The industries in the high technology group (and their SIC Codes) are as follows: Drugs (283); Ordinance and Accessories (348); Office, Computing and Accounting Machines (357); Electric Distribution Equipment (361); Electrical Industrial Apparatus (362); Household Appliances (363); Electric Lighting and Wiring Equipment (364); Radio and TV Receiving Equipment (365); Communication Equipment (366); Electronic Components and Accessories (367); Misc. Electrical Equipment and Supplies (369); Guided Missiles and Space Vehicles (376); Misc. Transportation Equipment (379); Engineering and Scientific Instruments (381); Measuring and Controlling Instruments (382); Optical Instruments and Lenses (383); Medical Instruments and Supplies (384); Opthalmic Goods (385); Photographic Equipment and Supplies (386); Watches, Clocks, and Watchcases (387).

CRITICAL ECONOMIC VARIABLES

1. The OPEC hike, the Iranian oil cutoff, and Saudia-Arabia's de-emphasis of the lighter crudes combined with oil price deregulation causing rampant price increases would effect the levels of employment in the following industries.

(SIC 15)	General Building Contractors
(SIC 16)	Heavy Construction Contractors
(SIC 17)	Special Trade Contractors
(SIC 24)	Lumber and Wood Products
(SIC 3079)	Miscellaneous Plastics Products
(SIC 371)	Motor Vehicles and Equipment
(SIC 3861)	Photographic Supplies
(SIC 45)	Air Transportation
(SIC 554)	Gasoline Service Stations

2. Political unrest and economic instability in Zaire, may increase the cost of copper, cobalt, and industrial diamonds, raw materials essential to (SIC 34), Fabricated Metal Products except Machinery and Transportation Equipment.

3. Barring worldwide political disruptions, employment will continue to increase in (SIC 34) Fabricated Metal Products except Machinery and Transportation Equipment and (SIC 38) Measuring, Analyzing, and Controlling Instruments.

4. Department of Defense and Department of Energy prime contract spending will remain at the same level or increase slightly thus maintaining employment levels in the electron tube industry (SIC 367), the communications industry (SIC 3662), engineering services industry (SIC 8911), and aircraft engines industry (SIC 3724).

5. Spending by state and local governments will gradually level.

6. The dislocation caused by increased transportation costs of raw materials, finished goods, and the labor pool will have an impact on the general economy.

Employment in Massachusetts Fiscal Year 1975 - 1981
(Thousands of people, not seasonally adjusted)

	1975	1976	1977	1978	1979 (projected)	1980 (projected)	1981 (projected)
Total Nonag. Wage and Salary Employment	2,286.7	2,302.5	2,370.1	2,472.7	2,560.8	2,574.7	2,635.4
Manufacturing Total	588.5	588.0	612.1	640.8	664.2	657.3	670.2
Durables	328.1	320.5	344.7	366.2	383.7	381.5	390.4
Lumber	4.5	4.8	5.2	5.7	6.0	5.8	6.1
Furniture	8.6	8.3	8.3	8.5	8.6	8.7	9.1
Stone, Clay, etc.	11.7	11.7	12.2	12.9	13.4	13.3	14.0
Primary Metals	16.0	15.8	16.9	16.9	17.1	17.0	17.5
Fabricated Metals	51.0	49.7	51.6	53.7	56.0	54.2	54.0
Non-elec. Machinery	75.6	72.9	79.9	84.9	91.5	92.3	94.9
Elec. Machinery	85.5	83.0	88.6	96.1	98.6	98.2	101.3
Transportation Equip.	30.7	30.3	32.9	35.8	38.1	38.1	37.9
Instruments	44.5	44.1	49.1	51.7	54.5	53.9	55.6
Nondurables	260.4	267.5	267.3	274.7	280.5	275.8	279.9
Food	28.9	29.2	29.1	29.7	31.5	31.8	31.8
Textiles	24.9	27.7	27.7	28.6	29.6	28.8	29.6
Apparel	41.1	43.4	42.7	43.8	43.4	42.7	43.3
Paper	28.5	28.7	29.1	30.1	30.9	30.6	30.6
Printing	40.7	40.7	42.1	42.6	44.3	44.7	45.3
Chemicals	20.0	18.9	17.5	17.4	17.8	17.5	17.5
Rubber	28.4	29.2	30.0	30.7	31.0	29.1	29.0
Leather	22.6	24.4	22.8	23.0	22.1	21.5	22.0
Other Nondurables	25.4	25.4	26.4	28.8	29.8	29.1	30.8
Nonmanufacturing	1,698.2	1,714.5	1,758.0	1,831.8	1,896.6	1,917.5	1,965.1
Contract Construction	83.6	73.6	69.9	72.8	78.0	78.5	84.3
Transport & Utilities	115.9	112.9	113.3	115.7	116.5	115.6	116.6
Wholesale & Ret. Trade	513.1	520.0	528.7	550.4	574.9	578.8	590.0
Finance, Ins. etc.	135.7	135.1	137.7	141.4	146.3	148.9	152.3
Service & Misc.	487.1	502.8	524.4	558.4	583.6	596.0	616.3
Government, total	362.8	370.1	384.0	393.1	397.4	399.6	405.7
Federal	57.6	58.1	57.0	56.8	56.0	56.7	57.0
State	85.5	84.6	86.3	86.1	86.8	88.1	89.7
Local	219.7	227.4	240.7	250.3	254.5	254.8	259.0

Table 8

Employment and Wages in Massachusetts' Nonmanufacturing Industries, 1975-1977 Annual Averages

Industry (SIC Code)	1975		1976		1977		Percent Change 1975-1977	
	Average Wage	Average Employment	Average Wage	Average Employment	Average Wage	Average Employment	Average Wage	Average Employment
All Subject Employment	$9,561	1,875,353	$10,164	1,904,522	$10,788	1,961,176	+12.8	+4.6
Manufacturing Employment	11,095	577,605	11,821	595,212	12,686	618,322	+14.3	+7.0
Nonmanufacturing Employment	8,878	1,297,748	9,411	1,309,310	9,914	1,342,854	+11.7	+3.5
Agriculture	8,823	9,009	9,589	9,226	10,369	9,156	+17.5	+1.6
Mining	12,571	874	13,528	849	14,626	911	+16.4	+4.2
Construction	12,900	79,891	13,249	71,685	13,641	71,115	+ 5.7	-11.0
Transportation, Communication, Electric, Gas, and Sanitary Services, Local and Intersuburban	12,455	108,534	13,534	107,749	14,788	109,534	+18.7	+0.9
Passenger Transit (41)	5,337	14,257	5,734	14,871	6,280	14,741	+17.7	+3.4
Trucking and Warehousing (42)	12,316	25,585	13,349	25,679	14,320	26,703	+16.3	+4.4
Water Transportation (44)	9,365	2,137	10,280	2,188	10,962	2,485	+17.1	+16.3
Transport by Air (45)	15,999	7,577	17,223	7,509	18,886	8,014	+18.0	+5.8
Transportation Services (47)	10,004	3,801	10,483	3,997	11,192	4,156	+11.9	+9.3
Communication (48)	13,644	37,378	15,458	34,999	17,128	35,032	+25.5	-6.3
Electric, Gas, and Sanitary Services (49)	15,248	17,791	15,964	18,499	17,372	18,394	+13.9	+3.4
Wholesale and Retail Trade	7,451	512,861	7,868	517,914	8,271	532,614	+11.0	+3.9
Wholesale Trade, Durables (50)	12,881	62,083	13,650	60,636	14,434	63,759	+12.1	+2.7
Wholesale Trade, Nondurable (51)	11,888	54,904	12,762	55,849	13,517	56,136	+13.7	+2.2
Building Materials, Hardware and Mobile Homes (52)	9,666	12,675	10,109	12,670	10,677	12,880	+10.5	+1.6
General Merchandise Stroes (53)	5,732	58,827	6,229	56,085	6,550	56,576	+14.3	-3.8
Food Stores (54)	6,243	73,627	6,523	76,103	6,871	76,761	+10.1	+4.3
Automotive Dealers and Service Stations (55)	9,027	40,149	9,490	41,428	9,808	42,856	+ 8.7	+6.7
Apparel Accessory Stores (56)	6,201	28,152	6,572	28,396	6,952	29,004	+12.1	+3.0
Furniture and Furnishing Stores (57)	8,083	14,289	8,360	14,795	8,780	14,434	+ 8.6	+1.0
Eating and Drinking Places (58)	3,791	109,776	3,997	115,832	4,258	122,707	+12.3	+11.8
Miscellaneous Retail Stores (59)	6,522	58,380	7,028	56,120	7,280	57,506	+11.6	-1.5

Table 8 (Con't)

Employment and Wages in Massachusetts'
Nonmanufacturing Industries, 1975 - 1977 Annual Averages

Industry (SIC Code)	1975		1976.		1977		Percent Change 1975 - 1977	
	Average Wage	Average Employment	Average Wage	Average Employment	Average Wage	Average Employment	Average Wage	Average Employment
Finance, Insurance and Real Estate	10,465	131,552	$11,159	131,769	11,814	135,210	+12.9	+ 2.8
Banking (60)	9,531	44,294	9,961	44,681	10,316	45,714	+ 8.2	+ 3.2
Credit Agencies (nonbank (61)	8,266	5,087	8,732	5,016	9,749	4,889	+17.9	- 3.9
Sec. Commodity Brockers and Serv. (62)	17,937	6,834	19,936	6,907	21,831	6,969	+21.7	+ 2.0
Insurance (63)	11,041	43,953	11,751	44,015	12,351	45,146	+11.9	+ 2.7
Insurance Agents, Brockers and Serv. (64)	11,279	12,118	12,069	12,338	13,103	12,685	+16.2	+ 4.7
Real Estate (65)	8,178	15,950	8,823	15,483	9,481	16,363	+15.9	+ 2.6
Combined R. E. Insurance (66)	8,689	1,255	9,470	1,246	10,824	1,263	+24.6	+ 0.6
Holding & Other Invest. Comp. (67)	12,906	2,061	14,067	2,084	15,321	2,182	+18.7	+ 5.9
Services*	8,463	455,028	9,080	470,120	9,524	484,313	+12.5	+ 6.4
Hotel, Motels, & Tourist Courts (70)	4,603	18,794	5,000	19,664	5,380	19,657	+16.9	+ 4.6
Personal Services (72)	5,563	23,611	6,037	23,191	6,315	23,496	+13.5	- 0.5
Business Services (73)*	8,895	66,149	9,357	69,558	9,439	74,683	+15.3	+12.7
Auto Repair, Serv. & Garage (75)	8,176	13,229	8,631	13,924	9,114	13,437	+11.5	+ 1.6
Misc. Repair Serv. (76)	10,548	6,726	11,161	6,700	11,700	5,845	+10.9	-13.1
Motion Pictures (78)	5,215	4,372	5,503	4,339	5,767	4,247	+10.6	- 2.9
Amusement & Rec. Serv. NEC (79)	6,959	14,018	6,403	14,439	6,883	14,776	- 1.1	+ 5.4
Health Services (80)	8,292	170,006	9,068	174,150	9,607	179,944	+15.9	+ 5.8
Legal Services (81)	9,471	10,469	10,580	10,526	11,735	10,940	+23.9	+ 4.5
Educational Services (82) *	8,960	59,011	10,264	62,282	11,013	62,693	+22.9	+ 6.2
Social Services (83) *	5,791	17,305	6,629	19,779	6,424	24,611	+10.9	+42.2
Museums and Gardens (84)	6,619	2,013	6,880	2,169	7,276	2,330	+ 9.9	+15.7
Membership Organizations (86) *	6,407	18,674	6,478	19,268	7,247	17,366	+13.1	- 7.0
Miscellaneous Services (89) *	15,494	30,616	15,315	30,502	16,163	30,239	+ 4.3	- 1.2

*Totals affected by changes
in coverage and in SIC coding

Source: ES -202

V. Employment Developments and Outlook by Occupation

a. Employment Trends

Information is provided in the following tables on the occupations of employed persons and the distributions of those occupations by age and sex. Since 1975, the Bureau of Labor Statistics has provided Massachusetts with an annual average occupational profile of its work force. The estimates are unfortunately subject to sampling error because of the survey size. Approximately 1,600 households are currently being surveyed and this number is not large enough to compensate for the considerable fluctuations in statistical accuracy when the totals are broken out into their component parts. Despite this factor, the BLS occupational profile does provide us with useful information on the changes that have taken place in the Commonwealth's employment composition, since the Decennial Census (1970), which can not be found elsewhere.

Table 9 provides the number of employed persons (men, women, and youth) by occupational category for Massachusetts for 1975 to 1978. In analyzing the data, we can see that the majority of women work at white collar jobs, a sector in which they out number men. However, while women seem well represented in the professional and technical category overall, they make up less than 20 percent of the managers and administrators, but over three-quarters of the clerical workers. Approximately 17 percent of employed women are blue collar workers. Following along the traditional trend, women are not very well represented in the crafts, but make up over half of the service workers.

Youth employment (16-19) is evenly divided among white collar, blue collar, and service jobs. The youth lack the experience for the professional and managerial work, so the overwhelming majority of them in the white collar category are in clerical or sales occupations. Most blue collar youth workers are either operative workers or nonfarm laborers.

Women and youth together make up over three-fourths of the service workers and almost all of the private household workers. Their over representation in this sector can largely be accounted by the fact that many women and youth only want, or can only accept, part-time work. In addition, these occupations have served as traditional entry positions for secondary job market participants.

Table 9

Employed Persons 16+ by Occupation
(in 000's)

	Both Sexes				Male				Female				Youth 16 -- 19			
													Both Sexes			
	1975	1976	1977	1978	1975	1976	1977	1978	1975	1976	1977	1978	1975	1976	1977	1978
TOTAL	2,430	2,499	2,555	2,663	1,405	1,472	1,475	1,522	1,025	1,028	1,080	1,141	221	234	232	244
White Collar Workers	1,343	1,337	1,354	1,441	663	662	656	704	680	675	699	737	74	78	77	83
Professional & Technical	467	462	469	488	266	261	254	274	200	201	215	214	3	7	4	7
Managers & Administrators	240	252	252	278	198	206	206	224	42	46	46	54	2	3	2	3
Sales Workers	162	149	150	159	95	88	88	91	67	61	62	68	20	24	21	24
Clerical Workers	474	474	483	516	103	107	108	115	371	367	375	401	49	45	49	51
Blue Collar Workers	735	799	830	838	583	626	648	638	152	173	182	199	74	78	81	86
Crafts & Kindred Workers	311	314	305	308	294	301	293	289	17	13	12	19	15	11	11	17
Operatives except Transp.	273	310	330	339	149	169	181	177	123	140	149	161	24	30	31	36
Transportation Equipment	63	64	81	82	59	60	74	75	4	4	7	7	6	4	4	3
Nonfarm Laborers	88	111	114	109	80	96	101	97	8	15	14	12	28	32	33	27
Service Workers	345	352	360	375	153	175	163	172	192	177	197	203	74	76	71	73
Private Households	23	22	18	15	1	1	1	1	21	21	17	14	12	11	6	4
Other Services	322	330	342	359	152	174	162	172	171	156	180	188	62	64	66	69
Farmworkers	7	11	10	10	6	9	8	7	1	2	2	2	1	2	2	1
Farmers & Managers	2	3	4	3	2	2	3	2	0	0	0	1	0	-	-	0
Farm Laborers and Supervisors	5	8	6	7	5	6	4	5	1	2	2	2	1	2	2	1

Note: Due to rounding the occupational groups may not add to total.
Source:Current Population Survey annual averages.

Table 10

Occupational Distribution of Employed Males by Age

	1970					1975				
	Male Total	16-19	20-24	25-64	65+	Male Total	16-19	20-24	25-64	65+
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White Collar Workers	45.0	26.4	44.1	46.8	46.4	47.2	18.1	41.4	51.1	51.7
Professional & Technical	17.5	3.3	20.0	18.7	13.4	19.0	0.8	18.6	21.0	17.6
Managers & Administrators	11.9	1.0	5.3	13.6	13.9	14.1	0.8	6.9	16.8	11.7
Sales Workers	7.0	8.1	6.3	6.8	10.8	6.8	8.5	5.6	6.5	13.2
Clerical Workers	8.6	14.0	12.5	7.7	8.3	7.3	8.0	10.3	6.8	9.2
Blue Collar Workers	44.3	51.5	46.6	44.0	34.3	41.4	54.6	46.1	39.9	26.1
Craft & Kindred Workers	20.7	9.6	19.0	22.3	16.5	20.9	12.0	17.3	23.0	8.2
Operatives Total	18.1	22.1	20.4	17.7	13.4	14.8	19.1	19.5	13.6	15.1
Except Transport	13.2	18.7	14.8	12.7	10.2	10.6	14.9	15.2	9.4	10.2
Transport Equipment	4.9	3.4	5.6	5.0	3.2	4.2	4.2	4.3	4.2	4.9
Nonfarm Laborers	4.5	19.8	7.2	4.0	4.4	5.7	23.5	9.3	3.6	2.8
Service Workers	10.0	20.6	8.7	8.7	17.7	10.9	26.7	11.4	8.7	18.5
Private Households	0.1	0.2	0.0	0.0	0.3	1.1	0.7	0.0	0.0	0.0
Other Services	9.9	20.4	8.7	8.7	17.4	9.8	26.0	11.4	8.7	18.5
Farmworkers	0.7	1.5	0.6	0.6	1.6	0.5	0.5	1.1	0.3	1.0
Farmers and Managers	0.3	0.1	0.1	0.3	1.0	0.2	0.0	0.5	0.0	1.0
Farm Laborers and Supervisors	0.4	1.4	0.5	0.3	0.6	0.3	0.5	0.6	0.3	0.0

Note: Due to rounding subtotals may not equal 100 percent.

Table 10 (con't)

Occupational Distribution of Employed Males by Age

	1977					1978				
	Male Total	16-19	20-24	25-64	65+	Male Total	16-19	20-24	25-64	65+
Total	100.0	100.0	100.0	100.0	100.00	100.0	100.0	100.0	100.0	100.0
White Collar Workers	44.5	21.1	31.2	48.9	49.2	46.2	20.9	34.2	50.8	56.0
Professional & Technical	17.2	2.7	11.1	20.0	10.2	18.0	3.0	11.4	21.0	12.8
Managers & Administrators	14.0	1.0	5.7	16.5	17.6	14.7	0.6	5.8	17.6	20.5
Sales Workers	6.0	7.5	5.2	5.7	12.1	6.0	8.1	6.2	5.4	13.3
Clerical Workers	7.3	9.9	9.2	6.7	9.3	7.6	9.1	10.8	6.8	9.4
Blue Collar Workers	44.0	54.9	53.6	42.1	25.7	41.9	51.8	51.7	39.8	25.1
Craft & Kindred Workers	19.9	8.3	19.6	21.3	17.2	19.0	12.1	17.2	20.3	13.5
Operatives Total	17.3	21.7	23.0	16.4	6.7	16.6	20.3	23.0	15.5	7.0
Except Transport	12.3	18.4	16.7	11.2	5.1	11.7	17.6	17.2	10.4	2.7
Transport Equipment	5.0	3.3	6.3	5.2	1.6	4.9	2.7	5.8	5.1	4.3
Nonfarm Laborers	6.8	24.9	11.0	4.4	1.8	6.4	19.4	11.5	4.1	4.5
Service Workers	11.1	22.8	14.7	8.8	21.8	11.3	26.4	13.8	9.0	16.7
Private Households	0.1	0.1	0.1	0.0	0.7	1.0	0.3	0.0	0.0	0.0
Other Services	11.0	22.7	14.6	8.8	21.1	11.3	26.1	13.8	9.0	16.7
Farmworkers	0.5	1.4	0.5	0.3	3.3	0.5	0.9	0.3	0.4	2.1
Farmers and Managers	0.2	0.0	0.0	0.2	3.3	0.2	0.1	0.0	0.2	1.2
Farm Laborers and Supervisors	0.3	1.4	0.5	0.1	0.0	0.3	0.8	0.3	0.3	0.9

Note: Due to rounding subtotals may not equal 100 percent.

Table 11

Occupational Distribution of Employed Females by Age

	1970					1975				
	Female Total	16-19	20-24	25-64	65+	Female Total	16-19	20-24	25-64	65+
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White Collar Workers	64.1	63.4	76.3	61.9	57.7	66.3	50.3	74.1	67.0	61.0
Professional & Technical	17.3	3.1	22.8	18.2	15.0	19.5	2.1	20.6	22.2	11.6
Managers & Administrators	3.1	0.5	1.8	3.7	4.9	4.1	0.6	2.5	5.1	4.0
Sales Workers	7.1	13.9	4.2	6.5	10.2	6.5	9.8	4.5	5.9	19.4
Clerical Workers	36.6	45.9	47.5	33.5	27.6	36.2	37.8	46.5	33.8	26.0
Blue Collar Workers	19.3	11.4	9.7	22.7	17.5	14.8	8.5	8.2	17.4	14.5
Craft & Kindred Workers	1.7	0.8	0.9	2.1	2.1	1.7	0.6	0.9	1.9	4.4
Operatives Total	16.9	9.5	8.3	19.9	14.7	12.3	7.3	6.7	14.5	9.8
Except Transport	16.6	9.4	8.2	19.5	14.5	12.0	6.7	6.4	14.2	9.8
Transport Equipment	0.3	0.1	0.1	0.4	0.2	0.3	0.6	0.3	0.3	0.0
Nonfarm Laborers	0.7	1.1	0.5	0.7	0.7	0.8	0.6	0.6	1.0	0.3
Service Workers	16.4	25.1	13.9	15.2	24.5	18.7	40.7	17.7	15.5	22.7
Private Household	1.6	1.7	0.7	1.4	7.3	2.1	10.0	0.6	1.0	7.2
Other Services	14.8	23.4	13.2	13.8	17.2	16.6	30.7	17.1	14.5	15.5
Farmworkers	0.2	0.1	0.1	0.2	0.3	0.1	0.4	0.0	0.0	1.8
Farmers and Managers	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.5
Farm Laborers and Supervisors	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.0	0.0	1.3

Note: Due to rounding subtotals may not equal 100 percent.

Table 11 (con't)

Occupational Distribution of Employed Females by Age

	1977					1978				
	Female Total	16-19	20-24	25-64	65+	Female Total	16-19	20-24	25-64	65+
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White Collar Workers	64.7	48.2	68.6	66.5	55.6	64.6	48.7	70.1	66.1	53.8
Professional & Technical	19.9	1.4	19.2	22.8	17.7	18.7	2.5	17.8	21.6	12.5
Managers & Administrators	4.3	1.0	3.1	5.1	1.6	4.7	1.3	3.8	5.4	5.9
Sales Workers	5.8	10.7	5.8	4.8	10.7	6.0	11.7	5.7	5.1	8.7
Clerical Workers	34.7	35.1	40.5	33.8	25.6	35.1	33.2	42.7	34.0	26.7
Blue Collar Workers	16.8	11.4	17.1	17.3	21.6	17.5	16.7	14.2	18.7	10.2
Craft & Kindred Workers	1.1	1.2	0.8	1.2	0.0	1.6	1.8	1.0	1.9	0.0
Operatives Total	14.4	7.9	13.7	15.2	21.6	14.7	12.3	11.2	16.1	10.2
Except Transport	13.8	7.7	13.4	14.4	21.6	14.1	12.2	10.7	15.4	10.2
Transport Equipment	0.6	0.2	0.3	0.8	0.0	0.6	0.1	0.5	0.7	0.0
Nonfarm Laborers	1.3	2.3	2.6	0.9	0.0	1.0	2.6	2.0	0.6	0.0
Service Workers	18.3	40.4	14.2	15.9	22.8	17.8	34.6	15.5	15.0	36.0
Private Household	1.6	5.3	0.5	1.1	6.8	1.3	3.8	0.7	0.9	5.2
Other Services	16.7	35.1	13.7	14.8	16.0	16.5	30.8	14.8	14.1	30.8
Farmworkers	0.2	0.1	0.1	0.3	0.1	0.2	0.0	0.2	0.2	0.0
Farmers and Managers	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0
Farm Laborers and Supervisors	0.2	0.1	0.1	0.2	0.1	0.2	0.0	0.2	0.1	0.0

Note: Due to rounding subtotals may not equal 100 percent.

Table 12
Employment Analysis Report Program (EARP)
1975-EEO-1 Report Summary for Massachusetts
Private Employers with at Least 100 Employees

	Total Employment	White Collar Workers						Blue Collar Workers				Service Workers
		Total	Officials and Managers	Profes-sional	Technicians	Sales Workers	Office and Clerical Workers	Total	Craft Workers	Operatives	Laborers	
Total Both Sexes	927,251	522,206	99,130	110,671	59,220	91,371	161,814	319,595	98,374	159,389	61,832	85,450
Total Males	532,343	267,960	83,990	73,057	36,563	45,525	28,825	225,619	89,506	99,752	36,361	38,764
Total Females	394,908	254,246	15,140	37,614	22,657	45,846	132,989	93,976	8,868	59,637	25,471	46,686
White Total	862,603	497,184	96,418	106,372	55,527	86,897	151,970	291,315	93,374	143,568	54,373	74,104
White Males	497,672	257,543	81,917	70,238	34,537	43,857	26,994	207,407	85,422	90,108	31,877	32,722
White Females	364,931	239,641	14,501	36,134	20,990	43,040	124,976	83,908	7,952	53,460	22,496	41,382
Minority Total	64,648	25,022	2,712	4,299	3,693	4,474	9,844	28,280	5,000	15,821	7,459	11,346
Minority Males	34,671	10,417	2,073	2,819	2,026	1,668	1,831	18,212	4,084	9,644	4,484	6,042
Minority Females	29,977	14,605	639	1,480	1,667	2,806	8,013	10,068	916	6,177	2,975	5,304
Black Total	37,400	15,386	1,562	2,100	2,275	2,275	7,174	14,072	2,666	7,686	3,720	7,942
Black Males	19,383	5,882	1,125	1,235	1,224	997	1,301	9,573	2,389	4,985	2,199	3,928
Black Females	18,017	9,504	437	865	1,051	1,278	5,873	4,499	277	2,701	1,521	4,014
Sp. Surnamed Amer.	20,071	4,436	669	718	654	779	1,616	12,970	2,063	7,467	3,440	2,665
Sp. Surnames American Males	12,053	2,378	566	543	440	463	366	7,994	1,493	4,383	2,118	1,681
Sp. Surnamed American Females	8,018	2,058	103	175	214	316	1,250	4,976	570	3,084	1,322	964
Oriental Total	4,662	3,254	279	1,398	528	253	796	922	188	531	203	486
Oriental Males	2,420	1,750	215	976	305	115	139	392	128	177	87	278
Oriental Females	2,242	1,504	64	422	223	138	657	530	60	354	116	208
American Indian	2,515	1,946	202	83	236	1,167	258	316	83	137	96	253
American Males	815	407	167	65	57	93	25	253	74	99	80	155
American Females	1,700	1,539	35	18	179	1,074	233	63	9	38	16	98

Source: Survey Branch, Office of Program Planning and Evaluation, Equal Employment Opportunity Commission.
Sample: 4,460 units, 2,029 employers.

Table 13

FULL-AND-PART-TIME STATUS OF THE CIVILIAN LABOR FORCE 16 YEARS AND OVER IN MASSACHUSETTS ANNUAL AVERAGES

	FULL TIME LABOR FORCE					PART TIME LABOR FORCE			
		EMPLOYED		UNEMPLOYED (Looking for full time work)				UNEMPLOYED (Looking for part time work)	
Year	Total	Full-Time Schedules	Part-Time for Economic Reasons	Number	Percent of Full-Time Labor Force	Total	Employed on Voluntary Part-Time	Number	Percent of Part-Time Labor Force
1978	2,338.	2,121.	92.	126.	5.4	497.	450.	47.	9.4
1977	2,287.	2,018.	98.	171.	7.5	493.	439.	54.	11.0
1976	2,258.	1,957.	97.	204.	9.0	505.	446.	59.	11.6
1975	2,229.	1,881.	99.	248.	11.1	506.	449.	57.	11.2

(Numbers in thousands)

Table 14

Occupational Distribution of Employment in Massachusetts, Annual Averages

	BOTH SEXES					MALES			
	1978	1977	1976	1975	1974	1978	1977	1976	1975
Total (all workers)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (white-collar workers)	54.1	53.0	53.0	55.3	53.7	46.2	44.5	45.0	47.2
Professional & Technical	18.3	18.4	18.5	19.2	17.8	18.0	17.2	17.7	19.0
Managers & Administrators	10.4	9.9	10.1	9.9	9.9	14.7	14.0	14.0	14.1
Sales Workers	6.0	5.9	6.0	6.7	6.5	6.0	6.0	6.0	6.8
Clerical Workers	19.4	18.9	19.0	19.5	19.5	7.6	7.3	7.3	7.3
Total (blue-collar workers)	31.5	32.5	32.0	30.2	32.4	41.9	44.0	42.5	41.5
Craft & Kindred Workers	11.6	12.0	12.6	12.8	12.6	19.0	19.9	20.4	20.9
Operatives, Except Transportation	12.7	12.9	12.4	11.2	12.7	11.7	12.2	11.5	10.6
Transportation Operatives	3.1	3.2	2.6	2.6	2.7	4.9	5.0	4.1	4.2
Nonfarm Laboroers	4.1	4.5	4.4	3.6	4.3	6.4	6.8	6.5	5.7
Service Workers	14.1	14.1	14.1	14.2	13.6	11.3	11.1	11.9	10.9
Farm Workers	0.4	NA	NA	0.3	0.4	0.5	NA	NA	0.5

Source: 1978, 1977, 1976, 1975, 1974, Geographic Profile of Employment and Unemployment U.S. Dept. of Labor, Bureau of Labor Statistics

b. Employment Projections by Occupation

The occupational projections which appear in this section are reprinted from Manpower Requirements for Massachusetts by Occupation, by Industry 1974 - 1985. The publication was prepared by the Occupation and Industry Research Department of the Massachusetts Division of Employment Security.

The total demand of occupations into 1985 is estimated as the sum of rising industrial growth demands and the need for replacing workers who leave the labor force because of death, retirement or other separation reasons. The Massachusetts projections are also closely linked to the national projections, produced by The United States Department of Labor, Bureau of Labor Statistics. The assumption, therefore, is that Massachusetts will follow these guidelines: (1) no radical change will occur in the institutional framework of the United States economy; (2) current social, technological and scientific trends will continue; (3) no major events will change the industrial structure of the economy or alter the rate of economic growth; (4) the economy will gradually recover from the high unemployment levels of the mid-1970's. All of these assumptions may not always hold true therefore, the projections should be viewed by their percent change rather than their levels of change.

The eleven-year growth component will amount to approximately 200,00, while more than five times this number will be needed as replacements. Because of a lack of current data, the age - specific separation rates for women are based solely upon the 1960 demographic distributions. To the extent that the 1960 separation rates overestimate actual separation rates, then the replacement forecasts will be too high.

Growth in the professional, technical and kindred division will be substantial over the 1974 - 1985 period. Demand will be particularly strong for medical and health workers, computer specialists, accountants, and electrical and industrial technicians. In addition, with the exception of civil engineers, who were hurt by the slowdown in construction, and aero-astronautical engineers, opportunities in the engineering field will and have been on the upswing. Because of a decline in school enrollments, the demand for teachers looks dim. (More will be mentioned about the outlook for college graduates in the following sections).

	Employment			Annual Labor Demand 1974 - 1985		
All Occupations	1970	1974	1985	Total Demand	Due to Growth	Due to Sept.
TOTAL, ALL OCCUPATIONS	2,355,685	2,436,468	2,635,143	120,885	18,043	102,842
White Collar	1,207,964	1,288,018	1,441,380	74,428	13,929	60,499
Blue Collar	821,371	807,113	819,501	24,385	1,119	23,266
Service Workers	314,189	330,591	368,388	22,165	3,437	18,728
Farmers & Farm Workers	12,161	10,746	5,874	-93	-442	349

As mentioned earlier the information furnished in this report should be used as indicators of trend, relative magnitude and probable direction rather than as specific forecasts of actual employment levels. The information should also be used in conjunction with other data prepared by this agency and other private and public organizations. For example, data on unfilled job openings can be used to modify the projections so as to provide an indicator of short-run trend.

Difficulty may arise in using the information contained in this report because of the various coding structures. Nevertheless, a match of the different coding systems may be obtained by referring to Matching Occupational Classifications to Vocational Education Program Codes published by the U. S. Department of Labor, Bureau of Labor Statistics. While not a complete match, this publication provides a usable cross-reference guide.

	Employment			Annual Labor Demand 1974 - 1985		
All Occupations	1970	1974	1985	Total Demand	Due to Growth	Due to Sep. 2/
TOTAL, ALL OCCUPATIONS	2,355,685	2,436,468	2,635,143	110,998	18,043	92,955
Prof., Tech., Kindred	368,103	401,568	454,129	18,318	4,769	13,549
Managers	230,838	259,447	279,684	12,405	1,841	10,564
Sales Workers	152,425	155,558	170,037	8,619	1,315	7,304
Clerical Workers	456,598	471,445	537,530	25,346	6,004	19,342
Crafts & Kindred Workers	306,841	308,484	332,755	11,593	2,207	9,386
Operatives	412,305	398,125	381,284	11,667	-1,535	13,202
Service Workers	314,189	330,591	368,388	19,766	3,437	16,329
Laborers, except Farm	102,225	100,504	105,462	3,269	447	2,822
Farmers & Farm Workers	12,161	10,746	5,874	15	- 442	457

Note: May not add to totals due to rounding

Along with the national outlook, white collar and service workers have displayed rapid growth among the broad occupational groups (two key occupations for women and youth employment). The clerical workers are expected to be a fast growing occupation; even with the influence of business machinery, this occupation will still need secretaries, receptionists, and other public dealing occupations.

Hospital and other medical care service occupations can expect excellent opportunities, especially in specialized fields. Managerial and sales categories are expected to experience a moderate demand due to additional workers being overshadowed by the necessity of replacement needs.

Table 15
Occupational Requirements for Massachusetts
1974-1985

Occupations	Employment 1974	Percent of Total	Employment 1985	Percent of Total	Annual Labor Demand 1974-1985: Total Demand	Annual Labor Demand 1974-1985: Due to Growth	Annual Labor Demand 1974-1985: Due to Separations
TOTAL, ALL OCCUPATIONS	2,436,468	100.00	2,635,143	100.00	110,998	18,043	92,955
Professional, Technical, Kindred	401,568	16.48	454,129	17.23	18,318	4,769	13,549
Engineers, Technical	45,153	(11.24)	47,866	(10.54)	1,164	247	917
Life & Physical Scientists	6,527	(1.63)	6,731	(1.48)	172	19	153
Mathematical Specialists	1,679	(0.42)	2,004	(0.44)	81	29	52
Engineers, Science Technicians	32,994	(8.22)	38,847	(8 55)	1,109	531	578
Medical Workers, Except Technicians	62,469	(15.56)	72,122	(15.88)	3,843	877	2,966
Health Technologists & Technicians	13,543	(3.37)	17,465	(3.85)	902	357	545
Technicians, Except Health	4,182	(1.04)	5,564	(1.23)	330	126	104
Computer Specialists	12,053	(3.00)	15,026	(3.31)	425	270	155
Social Scientists	6,228	(1.55)	7,149	((1.57)	202	76	126
Teachers	98,784	(24.60)	105,804	(23.30	3,921	638	3,283
Writers, Artists & Entertainers	30,226	((7.53)	33,968	(7.48)	1,416	340	1,076
Other Professional & Technical	87,730	(21.85)	101,583	(22.37)	4,854	1,259	3,595
Managers, Officials, & Proprietors	259,447	10.65	279,684	10.61	12,405	1,841	10,564
Buyers, Sales, & Loan Managers	47,159	(18.18)	57,333	(20.50	2,570	925	1,645
Administrators, Public Inspectors	23,676	(9.13)	26,372	(9.43)	1,474	246	1,228
Other Managers, Officials & Proprietors	188,612	(72.70)	195,979	(10.07)	8,361	670	7,691
Sales Workers	155,558	6.38	170.037	6.45	8,619	1,315	7,304
Clerical Workers	471,445	19.35	537,530	20.40	25,346	6,004	19,342
Stenographers, Typists & Secretaries	138,365	(29.35)	168,358	(31.32)	9,026	2,727	6,299
Office Machine Operators	23,683	(5.02)	22,405	(4.17)	443	-117	560
Other Clerical Workers	309,397	(65.63)	346,767	(64.51)	15,877	3,394	12,483
Craft & Kindred Workers	308,484	12.66	332,755	12.63	11,593	2,207	9.386
Construction Crafts Workers	128,688	(41.72)	144,477	(43.42)	4,160	1,434	2,726
Metalworking Cragt Works	36,687	(11.89)	37,432	(11.25)	1,206	69	1,137
Mechanics, Repairers, & Installers	73,796	(23.92)	84,276	(25.33)	2,745	953	1,792
Printing Trade Craft Workers	15,390	(4.99)	14,980	((4.50)	465	-37	502
Transportation, Public Utility Crafts	16,903	(5.48)	16,602	(4.99)	154	-27	181
Other Crafts, Kindred Workers	37,020	(12.00)	34,988	(10.51)	1,454	-185	1,639
Operatives	398,125	16.34	381,284	14.47	11,667	-1,535	13,202
Operatives, Except Transportation	320,273	(80.45)	302,144	(79.24)	9,508	-1,653	11,161
Transportation Equipment Operatives	77,852	(19.55)	79,140	(20.76)	2,160	118	2,042
Service Workers	330,591	13.57	368,388	13.98	19,766	3,437	16,329
Cleaning Service Workers	59,711	(18.06)	69,184	(18.78)	5,080	861	4,219
Food Service Workers	116,400	(35.21)	127.684	(34.66)	5,564	1,026	4,538
Health Service Workers	59,554	(18.01)	80,733	(21.92)	4,877	1,926	2,951
Personal Service Workers	36,502	(11.04)	40,278	(10.93)	2,268	344	1,924
Protective & Service Workers	44,783	(13.55)	43,308	(11.76)	1,744	-135	1,879
Private Household Workers	13,641	(4.13)	7,201	(1.95)	233	-585	818
Laborers, Except Farm	100,504	4.12	105,462	4.00	3,269	447	2,822
Farmers & Farm Workers	10,746	0.44	5,874	0.22	15	-442	457
Farms & Farm Managers	4,437	(41.29)	2,278	(38.78)	49	-196	245
Farm Laborers, Farm Supervisors1	6,309	(58.71)	3,596	(61.22)	-	-246	211

1/ Revised Average Annual Number of Job Openings due to Separations
Note: May not add to totals due to rounding

c. Outlook for College Graduates 1979

The following is a summary of a recent publication done by the United States Department of Labor, Bureau of Labor Statistics, Employment Outlook for 1979 College Graduates in New England. The consensus from interviews and discussions with college placement and career directors, and private recruiters, is that the job prospects for college graduates appear to be better now then they have been in recent years. Even with the uncertain economic outlook, job offers in almost all specialties were higher this year than last.

Graduates of engineering and scientific disciplines are the most in demand. Chemical engineers are the most highly sought after among scientific engineers, with mechanical engineers second. Many of Massachusetts' large defense and aerospace companies are actively recruiting for electrical engineers, and a wide variety of manufacturers are seeking mechanical engineers. Civil engineers can also expect an improved outlook, but their opportunities should be looked upon in a national rather than a regional context.

Graduates with degrees in computer science will be in demand far beyond their supply. Most of them will be hired as either software engineers or system engineers. Graduates in life or physical science disciplines will have no trouble finding research and development jobs in either manufacturing or nonmanufacturing industries.

The number of jobs offered to graduates with business degrees will be up this year from last. There will be a strong demand for accountants. While other business graduates will not be in as much demand as their accounting counterparts, they will have little problem finding jobs as management trainees or sales representatives. There are good opportunities for graduates with a Masters of Business Administration despite their increasing supply in recent years.

Opportunities in health related occupation are extremely plentiful because of continued emphasis on health care. Education majors still face a tight market due to the drop in school enrollments. Despite the enrollment decline, there are teacher shortages in fields such as mathematics, the sciences, vocational specialties, and foreign languages.

The overall outlook for graduates looks bright, but one should consider that with rising energy costs, gasoline shortages, and a predicted economic slowdown, there may be fewer opportunities then we currently anticipate.

VI. Trends in Unemployment

The unemployment rate is the most widely used indicator in measuring the performance of a state's economy. It is designed to measure the portion of the overall labor force that is unutilized at any given period of time. One of the major sources of data at the national and state level is the Current Population Survey (CPS), which is a household-based survey conducted monthly by the Bureau of Census for the United States Department of Labor's Bureau of Labor Statistics. The unemployment rate is calculated by dividing the number of people who are classified as unemployed (someone who did not work at all during the reference week, had looked for work at sometime during the past four weeks, and was available for work at the time of the survey) by the civilian labor force (the sum of the employed and unemployed).

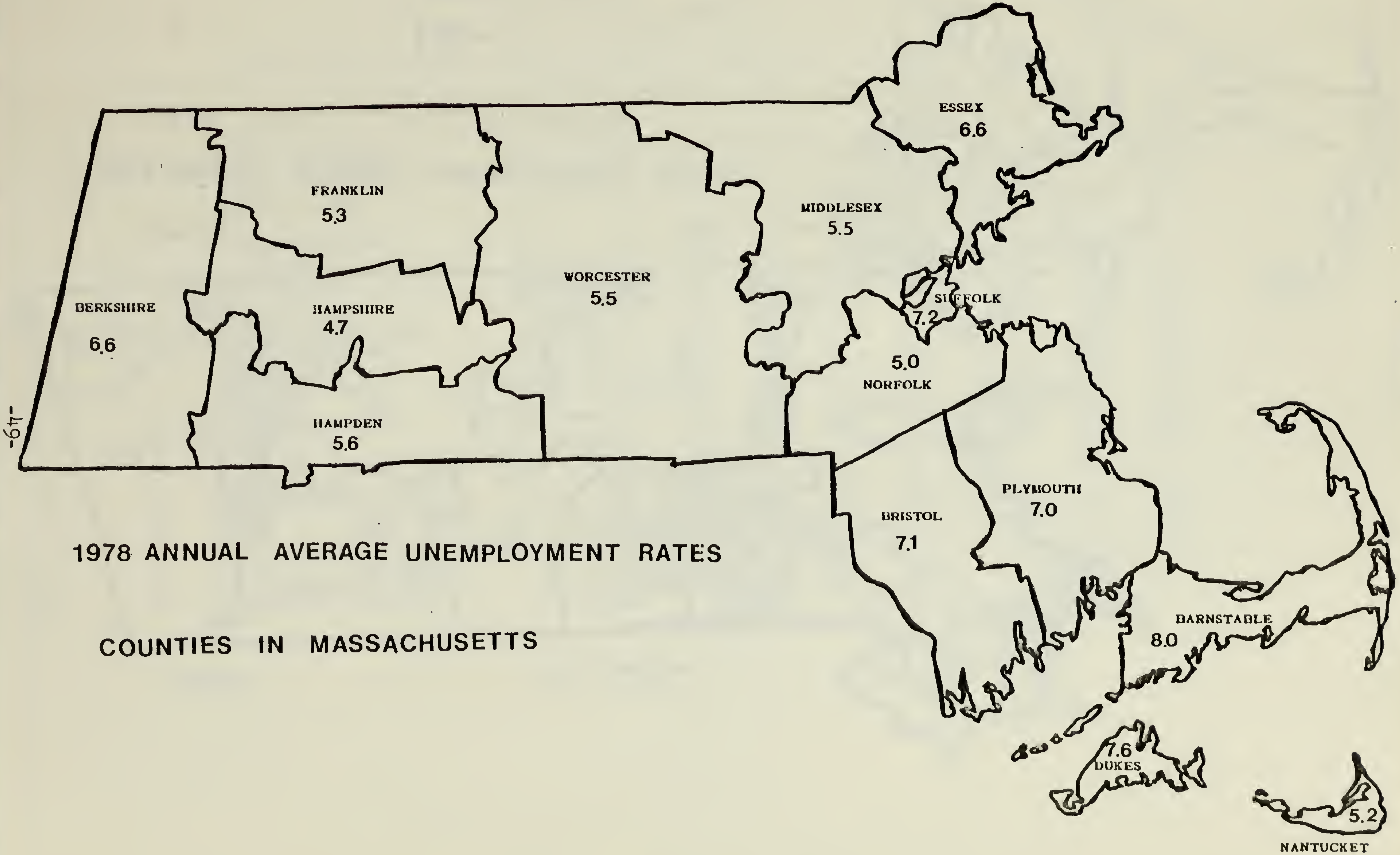
This section will examine estimates of the annual average unemployment rates for Massachusetts, the United States, and the other Ten Largest States during 1970 to 1978. In addition, demographic data is provided to view the unemployment situation of different components within the Massachusetts economy.

The findings that appear on Table 16 show that over the last eight years (since 1971), Massachusetts' annual average unemployment rate has been above that of the nation. The degree of improvement in Massachusetts unemployment conditions vis - a - vis the rest of the country become clear when one considers that the Commonwealth's unemployment rate has fallen five percentage points since the 1975 recession and stands with only a 0.1 percentage point differential from the national annual rate for 1978.

Massachusetts' economy is expected to slow due to a decline in its employment growth rate into **next year.** The April 1979 Massachusetts Economic Policy Analysis (MEPA) Model Forecast, by George I. Treyz and Roy E. Williams, predicts employment growth for the first half of 1979, followed by two quarters of slight employment decline. Employment is predicted to start to grow again during 1980, but at a slower rate than the average employment growth of almost four percent per year in the last two years. This factor, along with the predicted assumption that people will be still entering and reentering the labor force, allows us to believe that the unemployment rate for Massachusetts will increase into 1980. However, we feel Massachusetts will fare better in an employment slowdown than will the nation.

As was indicated in the industrial outlook, Massachusetts is not expected to experience any major changes in its economy during the next year.

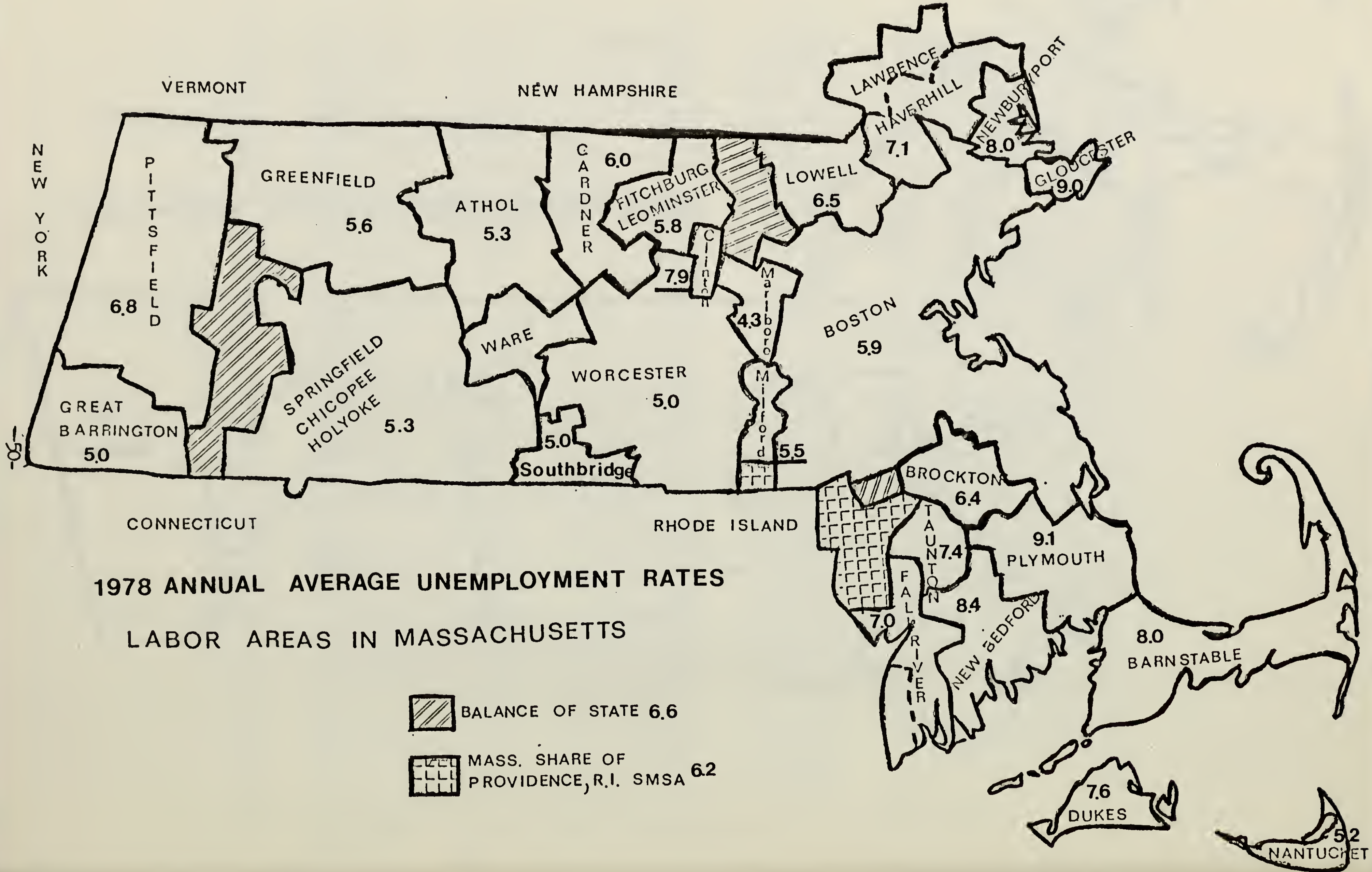
Chart 2



1978 ANNUAL AVERAGE UNEMPLOYMENT RATES

COUNTIES IN MASSACHUSETTS

Chart 3



1978 ANNUAL AVERAGE UNEMPLOYMENT RATES

LABOR AREAS IN MASSACHUSETTS

Table 16

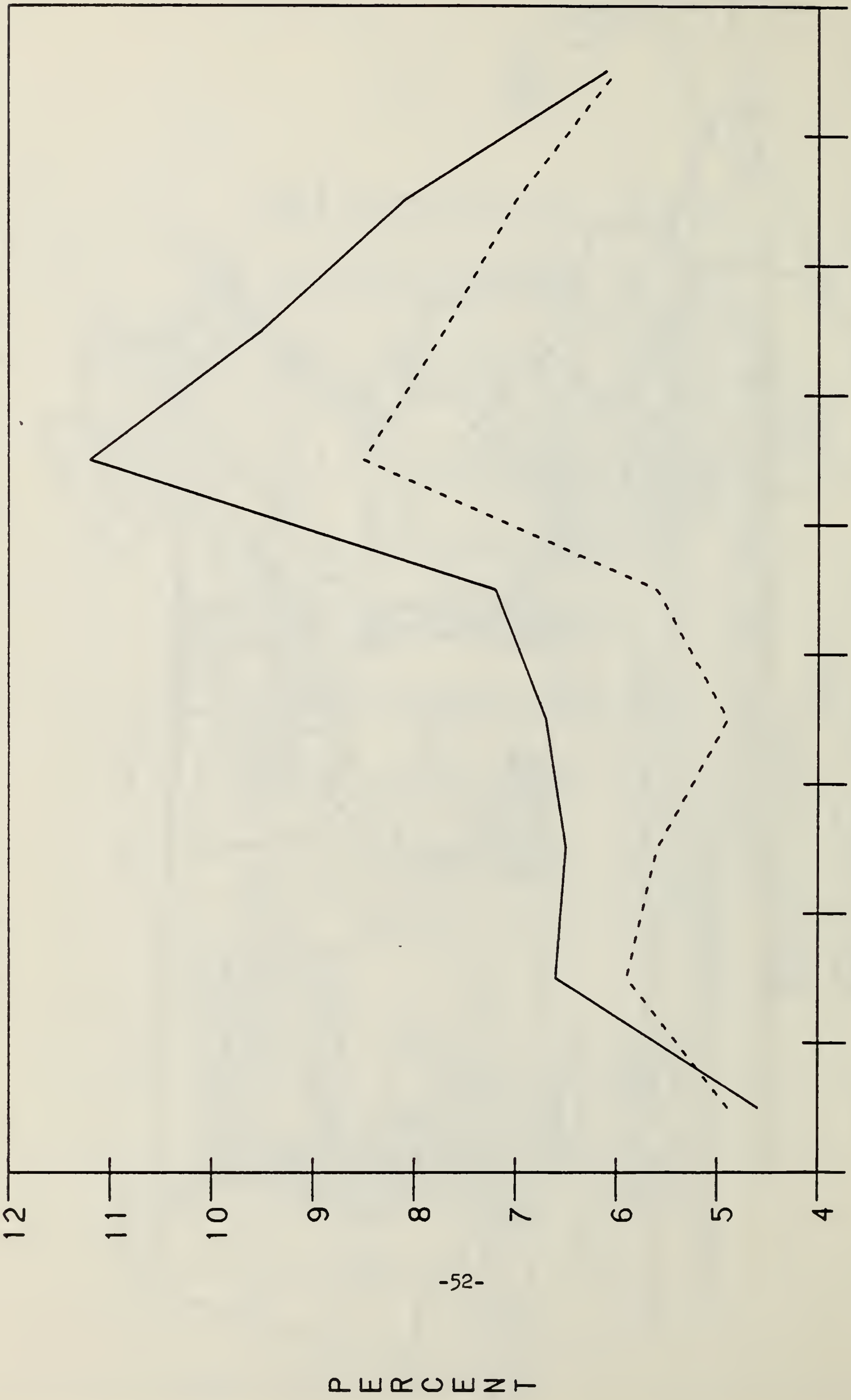
Unemployment Rates for the United States, Massachusetts and the Ten Largest States
(16 Years and Over, 1970 - 1978)

Annual Averages	1970	1971	1972	1973	1974	1975	1976	1977	1978
UNITED STATES	4.9	5.9	5.6	4.9	5.6	8.5	7.7	7.0	6.0
Massachusetts	4.6	6.6	6.5	6.7	7.2	11.2	9.5	8.1	6.1
California	7.3	8.8	7.6	7.0	7.3	9.9	9.2	8.2	7.1
Florida	4.3	4.9	5.1	4.3	6.2	10.7	9.0	8.2	6.6
Illinois	4.1	5.1	5.1	4.1	4.5	7.1	6.5	6.2	6.1
Michigan	6.7	7.6	7.0	5.8	8.5	12.5	9.4	8.2	6.9
New Jersey	4.6	5.7	5.8	5.6	6.3	10.2	10.4	9.4	7.2
New York	4.5	6.6	6.7	5.4	6.4	9.5	10.3	9.1	7.7
Ohio	5.4	6.5	5.6	4.3	4.8	9.1	7.9	6.5	5.4
Pennsylvania	4.5	5.4	5.4	4.8	5.1	8.3	7.9	7.7	6.9
Texas	4.4	5.0	5.1	3.9	4.3	5.6	5.7	5.3	4.8
Rank of Massachusetts	4th*	3rd#	4th	2nd	3rd	2nd	3rd	6th	3rd**
Mass. - U. S. Difference	-0.3	+0.7	+0.9	+1.8	+1.6	+2.7	+1.8	+1.1	+0.1

*Tied with New Jersey
#Tied with New York
**Tied with Illinois

Chart 4

ANNUAL AVERAGE UNEMPLOYMENT RATE
MASSACHUSETTS(SOLID) VS UNITED STATES(DASH)



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DIV. OF EMPLOYMENT SECURITY

MASSACHUSETTS

Table 17 Annual Average Unemployment Rates by Age and Sex

	Total 16+	Men 16+	Women 16+	Men 20+	Women 20+	Both Sex 16-19
1978	6.1	5.8	6.5	4.9	5.2	15.9
1977	8.1	7.9	8.3	6.7	7.1	18.9
1976	9.5	8.8	10.5	7.9	9.2	19.4
1975	11.2	11.3	11.0	9.9	9.8	21.9

Source: Geographic Profile of Employment and Unemployment.
1975, 1976, and 1978

Table18Unemployed Persons by Duration of Unemployment in Massachusetts

Year	Total Unemployed (in thousands)	Percent distribution by duration of unemployment					
		Total	Less than 5 weeks	5-14 Weeks	15-26 Weeks	27-51 Weeks	52 Weeks or longer
1978	173	100.0	41.1	34.0	11.7	5.3	7.9
1977	225	100.0	35.3	28.8	12.9	11.3	11.7
1976	263	100.0	56.9		15.2	12.7	15.2
1975	305	100.0	59.3		18.6	12.7	9.4

Source: Geographic Profile of Employment and Unemployment
1975, 1976, 1977, and 1978

Table 19

Annual Average Unemployment Rates by Occupation

MASSACHUSETTS

	1978	1977	1976
Total	6.1	8.1	9.5
White Collar Total	3.7	4.8	6.1
Professional & Technical	2.8	2.8	4.0
Managers & Administrators	3.0	4.1	4.2
Sales Workers	3.7	6.0	6.4
Clerical Workers	4.9	6.7	8.8
Blue Collar Total	7.3	10.7	12.5
Craft & Kindred Workers	5.6	8.5	10.7
Operatives, Except Transp.	7.1	10.3	12.5
Transportation Equip.	7.2	10.7	10.2
Nonfarm Laborers	12.5	16.8	18.4
Service Workers	6.2	6.5	7.7
Farm Workers	4.5	NA	9.4

Source: 1976, 1977, and 1978 Geographic Profile of Employment and Unemployment

a. Characteristics of Insured Unemployed

The characteristics of the insured unemployed which are contained in the following table were obtained from a sample survey of approximately 30 to 40 percent of the active file of claimants. The survey was undertaken within any particular week during the given reference period for each local office. Information on the characteristics of the insured unemployed may help to achieve the following objectives:

a. Promote employment opportunities

b. Improve utilization of manpower resources

c. Guide economic policies

d. Improve public information and understanding

The data from the table gives the distribution levels of the characteristics for the regular claimants found for each survey period. The distribution levels given do not necessarily reflect the same levels of those people who are unemployed and who are not insured under the Massachusetts Employment Security Law. Approximately 30 percent of the state's unemployed persons are not insured under this law.

The sample indicates that the largest portion of claimants fall between the ages of 25 to 34 and the percentages decrease as age increases. The sex composition shows that there are more men than women claimants and that the percentage difference seems to be lessening over the years. Nine out of ten claimants are in the white racial group and less than 2 percent of those collecting under the regular U.I. program registered with a Spanish surname.

The occupational attachment of the claimants should be analyzed with the consideration that the distribution is reflected as a subset of the total. Those occupations that employ more individuals tend to have a higher insured unemployment percentage. It is worth while noting that there has been an increase in the professional, technical, and manageral claimants in the recent survey.

The industrial attachment of the claimants has taken a shift from manufacturing industries to the services and government sectors. The increase in governmental claimants was precipitated by a loss of public service jobs in Massachusetts.

In analyzing the average weekly wage, one should note this definition:

Average Weekly Wage: An amount equal to one-twenty-sixth of the total wage reported for an individual in the two highest quarters of his last period or if wages were reported for not more than two quarters the average weekly wage was equal to one-thirteenth of the highest quarter's reported wage.

Table 20

Selected Characteristics of Insured Unemployed
Statewide

Statewide-Percentage of Regular Program

	May- June 77	Sept.- Oct. 77	Dec.- Jan. 78	May- June 78	Aug.- Sept. 78	Oct.- Dec. 78
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
AGE						
under 25	20.7	19.9	21.9	18.1	18.2	19.1
25 - 34	25.9	25.6	25.7	28.1	27.6	27.8
35 - 44	15.8	16.2	15.5	16.0	17.6	15.7
45 - 54	15.3	15.2	16.0	14.3	15.2	14.4
55 - 64	13.8	13.8	13.6	14.1	12.7	13.1
65 & Over	8.3	9.1	7.1	9.0	8.3	9.5
I.N.A.	0.2	0.2	0.2	0.4	0.4	0.4
SEX						
Men	62.6	58.1	65.2	63.0	54.3	57.7
Women	37.4	41.9	34.8	37.0	45.6	42.3
I.N.A.	0.0	0.0	0.0	0.0	0.1	0.0
ETHNIC GROUP						
White	92.3	93.2	94.4	90.7	92.2	92.2
Nonwhite	4.8	5.1	4.6	6.6	6.0	5.9
I.N.A.	2.9	1.7	1.0	2.7	1.8	1.9
SPANISH SURNAME	1.8	1.0	1.0	1.9	1.9	1.3
OCCUPATION						
Prof., Tech., Mgt.	14.1	16.7	12.9	17.2	19.9	21.0
Clerical/Sales	20.8	22.2	16.8	21.0	19.6	23.3
Services	10.5	11.8	10.5	10.3	12.3	11.7
Farm., Fish., Forestry	1.5	1.5	3.6	1.8	1.9	1.5
Processing	2.6	2.0	2.2	2.7	2.1	2.0
Machine Trades	8.1	7.6	7.1	7.5	7.0	7.7
Bench Work	9.3	9.5	9.6	8.3	7.6	8.1
Structural	17.7	12.8	21.6	17.6	11.6	12.3
Miscellaneous Work	15.4	15.9	15.6	13.5	17.7	12.3
I.N.A.	0.0	0.0	0.1	0.1	0.3	0.1
RECENT DURATION						
0 - 9 Weeks	46.7	51.8	63.7	47.1	60.1	53.1
0 - 19 Weeks	31.4	30.4	23.6	33.2	25.1	31.5
20 - 29 Weeks	15.9	15.0	10.8	17.0	13.0	14.7
30+ Weeks	2.0	2.2	1.5	2.6	1.4	0.7
I.N.A.	4.0	0.6	0.4	0.1	0.4	0.0

Table 20(Continued page 2)
Selected Characteristics of Insured Unemployed

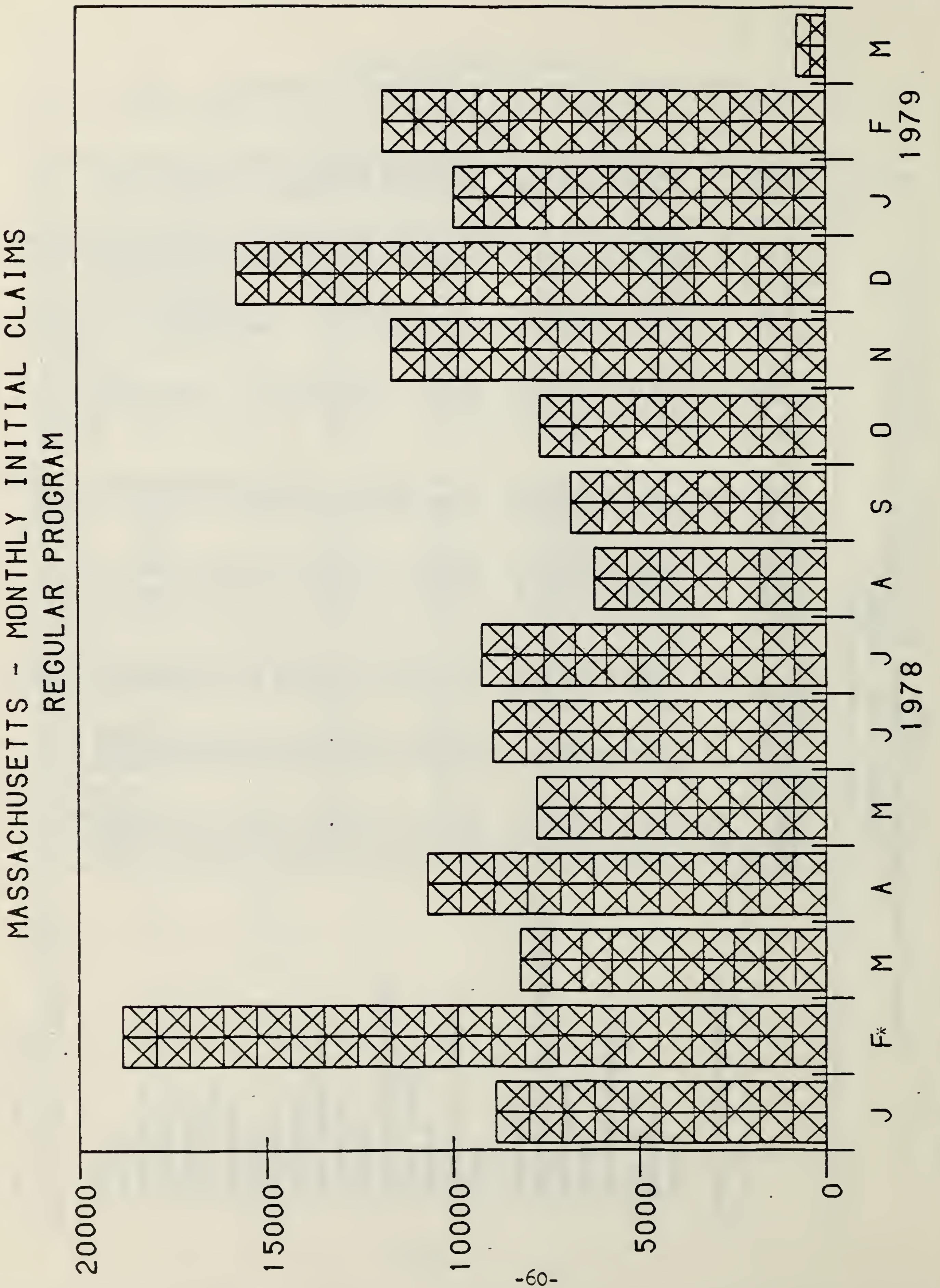
	Statewide—Percentage of Regular Program					
	May-June 77	Sept.-Oct. 77	Dec.-Jan. 78	May-June 78	Aug.-Sept. 78	Oct.-Dec. 78
INDUSTRY ATTACHMENT						
Manufacturing	29.6	28.4	29.7	26.6	22.7	25.7
Con. Construction	14.2	9.2	18.6	12.7	6.5	8.0
Tran./Utilities	3.8	6.1	4.0	4.4	8.2	4.1
Wholesale, Ret., Trade	22.0	23.6	19.7	21.9	19.3	21.0
Finance, Ins./ R. E.	3.2	3.6	2.9	3.5	2.9	3.6
Services	14.3	17.2	14.4	15.4	16.5	19.3
Governments	4.8	7.0	5.0	10.5	19.7	13.4
Others	1.1	1.3	3.2	1.4	1.4	1.2
I.N.A.	7.0	3.3	2.5	3.6	2.8	3.7
AVERAGE WEEKLY WAGE						
Under $100	21.4	22.4	19.2	17.5	20.6	15.3
$100 - 149	23.2	22.7	22.2	22.4	22.3	21.2
150 - 199	18.8	19.8	19.3	21.0	20.6	22.5
200 - 249	12.7	12.7	13.9	13.5	11.2	14.8
250 - 299	8.4	7.7	8.8	8.9	6.8	9.0
300 or more	12.5	12.2	12.8	13.8	11.3	14.7
I.N.A.	3.0	2.5	3.8	2.9	7.2	2.5
SEPARATION REASON						
Layoff	85.8	85.7	92.1	82.6	86.8	80.3
Quit Vol. Ret.	0.6	0.4	0.2	0.6	0.6	0.5
Quit Pregnancy	0.1	0.0	0.0	0.2	0.1	0.2
Quit Other	3.0	3.4	1.6	3.7	2.5	3.9
Discharges	8.1	8.1	4.6	9.6	8.3	7.7
Labor Dispute	0.3	0.2	0.1	0.3	2.2	0.3
Other/INA	2.1	2.2	1.4	3.0	0.5	7.1

Table 21
Selected Characteristics of Insured Unemployed by Labor Area
(Percent of All Programs)
August-September 1978

	Age							Sex		
	Under 25	25-34	35-44	45-54	55-64	65 and over	INA	Men	Women	INA
State of Massachusetts	17.9	27.6	17.6	15.1	12.9	8.4	0.4	54.5	45.5	--
Boston	16.5	27.8	17.8	15.3	12.7	9.4	0.4	55.3	44.7	--
Brockton	17.6	27.5	20.7	15.4	13.8	4.8	0.2	51.9	48.1	--
Fall River	25.2	25.4	16.6	15.7	12.5	4.3	0.1	51.6	48.4	--
Lawrence-Haverhill	19.3	25.2	19.8	12.1	15.1	8.0	0.5	46.7	53.3	--
Lowell	15.6	27.2	20.1	18.3	11.2	7.0	0.6	51.7	48.3	--
New Bedford	18.8	29.5	14.2	16.7	15.0	5.5	0.3	61.1	38.9	--
Springfield-Chicopee-Holyoke	22.5	26.6	14.8	14.3	13.0	8.3	0.4	56.4	43.6	--
Worcester	17.2	25.4	16.4	16.5	13.6	10.5	0.3	53.3	46.7	--
Athol	29.0	31.2	17.9	11.1	7.9	3.2	--	55.0	45.0	--
Barnstable County	14.9	26.7	20.3	13.8	15.2	8.4	0.6	55.9	44.1	--
Clinton	23.9	36.5	12.7	12.7	9.8	4.3	--	61.2	38.8	--
Dukes County*	16.0	45.0	16.0	6.1	13.0	--	3.9	51.9	48.8	--
Fitchburg-Leominster	17.3	21.7	15.7	20.0	16.8	8.1	0.3	47.4	52.5	--
Gardner	20.0	36.6	13.1	14.7	10.5	4.4	1.0	54.1	45.9	--
Gloucester	18.7	24.8	19.4	18.8	9.9	8.4	--	63.2	36.8	--
Great Barrington	10.6	39.4	21.1	21.1	--	7.0	--	43.0	57.0	--
Greenfield	21.6	32.1	15.9	14.9	11.8	3.6	--	47.2	52.8	--
Marlboro	11.0	26.4	28.3	13.6	12.5	8.4	--	49.7	50.3	--
Milford	17.9	29.4	17.3	11.5	16.0	7.7	--	56.0	44.0	--
Nantucket*	11.8	36.8	5.9	25.0	11.8	--	5.9	36.8	61.8	0.4
Newburyport	23.5	77.6	14.5	14.4	9.0	10.2	0.7	45.0	55.0	--
Pittsfield	20.3	26.4	19.6	15.3	10.3	7.9	0.2	51.8	48.2	--
Plymouth	15.9	31.5	19.6	10.9	3.4	8.3	0.3	55.8	43.9	0.3
Southbridge	16.6	32.7	15.7	8.2	14.5	12.6	--	53.3	46.5	0.2
Taunton	21.2	30.5	21.5	10.9	8.9	7.3	--	54.6	45.4	--
Ware	19.4	34.8	14.8	7.1	9.7	14.8	--	55.5	44.5	--
Mass. Portion of Rhode Island	16.1	28.1	13.8	17.1	10.0	14.1	0.7	49.2	50.8	--

* May - June 1978

Chart 5



*Blizzard of 1978

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Chart 6

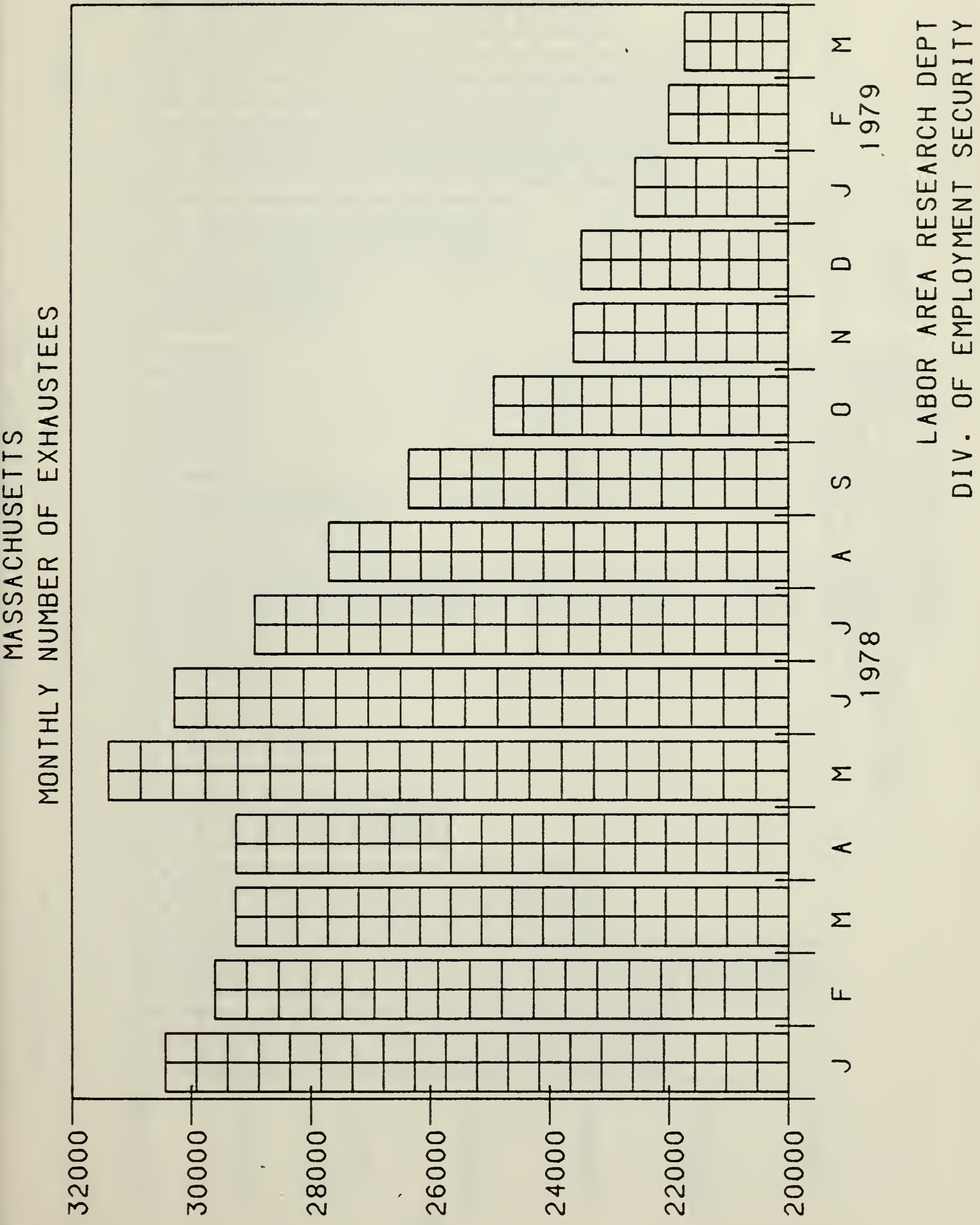
MASSACHUSETTS
MONTHLY NUMBER OF EXHAUSTEES
32000
30000
28000
26000
24000
22000
20000
J
F
M
A
M
J
J
1978
A
S
O
N
D
J
F
1979
M
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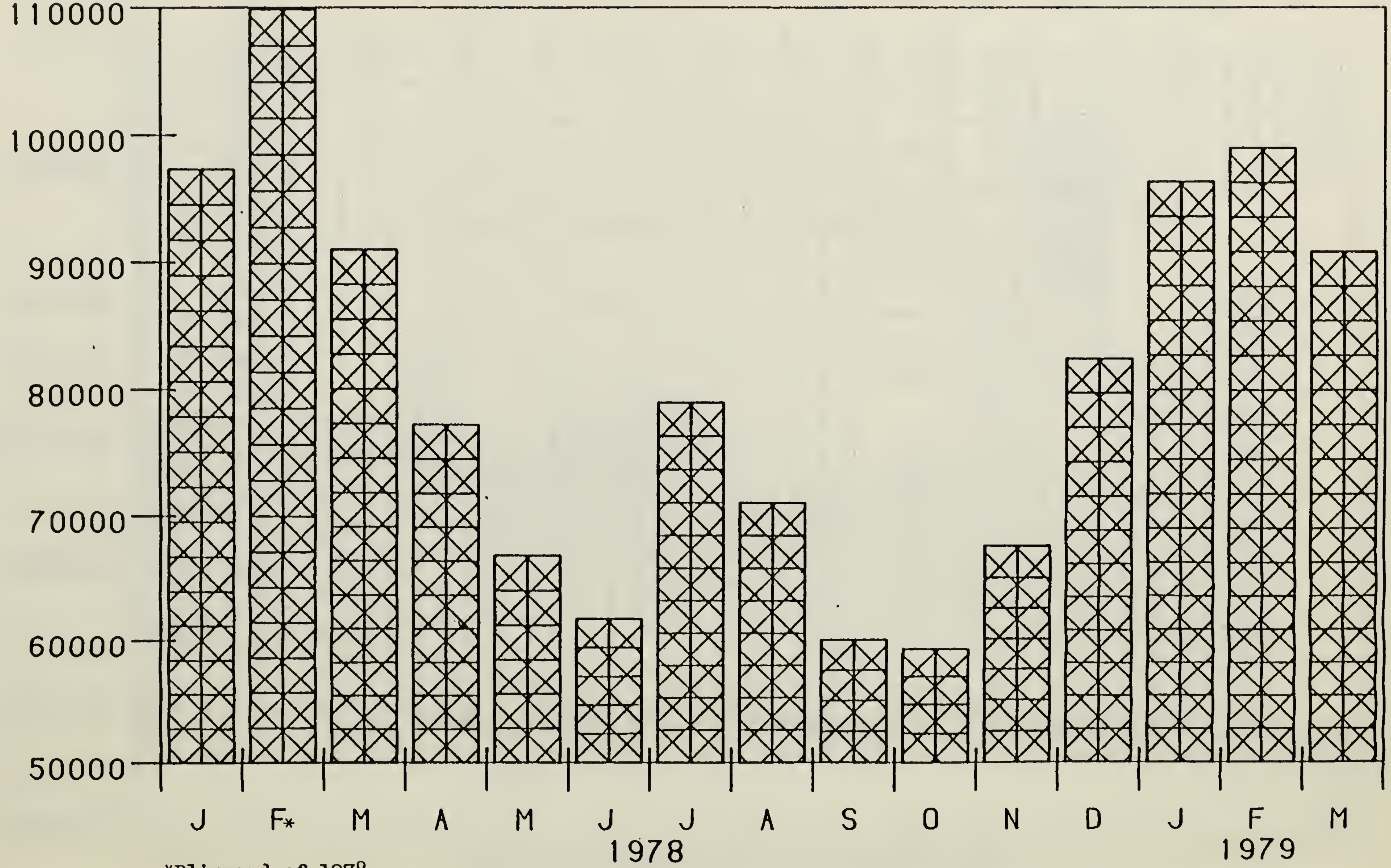
Chart 7

MASSACHUSETTS
CONTINUED CLAIMS BY SURVEY WEEK
FOR REGULAR PROGRAM



*Blizzard of 1978

LABOR AREA RESEARCH DEPT.
DIV. OF EMPLOYMENT SECURITY

b. Unemployment by Industrial Group

A percentage breakout of Regular Unemployment Insurance Program benefits paid by industry is presented on Table 22 . The information is for the months of March in the years 1977, 1978 and 1979, and it reflects payment activity during the week containing the twelfth of the month. The number of claimants from which these percentages were derived were nearly equal in 1978 and 1979 at just over 90,000. In March 1977, there were 108,000 claimants during the survey week.

Comparing March 1979 to March 1978, manufacturing increased its percentage share of total claimants, with both durable and nondurable goods industries sharing in the rise. The electrical machinery industry accounted for half of the augmentation in the share of claimants from durable goods industries, although most industries in this sector showed some increase. Among nondurable goods industries, leather products nearly doubled its percentage, and textiles and apparel also went up. However, these rises were largely offset by decreases in the percentage of claimants from rubber and plastics, chemicals, and printing.

The decline in the percentage of claimants from nonmanufacturing industries was due to the halving in the percentage of unclassified claimants, and the ninety percent drop in claims from state government. Contract construction accounted for twenty-eight percent of all claimants, and wholesale and retail trade for one-fifth.

Table 22
Regular Total Benefit Payments March 1977 - March 1978 - March 1979
Massachusetts

	March 1977			March 1978			March 1979		
	Total Percent of Total Payment	Male	Female	Total Percent of Total Payment	Male	Female	Total Percent of Total Payment	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Manufacturing	24.5	19.5	36.9	22.3	17.4	34.8	26.1	19.9	41.1
Durable Goods Total	9.0	9.0	9.2	8.9	8.7	9.5	11.0	10.6	12.0
Lumber & Wood	0.4	0.4	0.2	0.3	0.4	0.3	0.4	0.4	0.2
Furniture & Fixture	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.7
Stone, Clay & Glass	1.1	1.4	0.5	1.3	1.6	0.5	1.0	1.3	0.3
Primary Metals	0.6	0.6	0.4	0.5	0.5	0.3	0.5	0.5	0.4
Fabricated Metals	2.1	2.2	1.8	2.0	2.0	1.9	2.5	2.7	1.8
Machinery (Except Elec.)	1.5	1.6	1.2	1.5	1.6	1.2	1.4	1.4	1.4
Electrical Machinery	1.7	1.2	3.0	1.6	1.1	3.0	2.7	2.0	4.4
Transportation Equipment	0.2	0.3	0.1	0.4	0.6	0.1	0.8	1.1	0.2
Instruments	0.8	0.6	1.5	0.9	0.6	1.8	1.2	0.7	2.6
Nondurable Goods Total	15.5	10.5	27.7	13.4	8.7	25.4	15.1	9.4	28.8
Food & Kindered Products	1.8	1.6	2.4	1.5	1.2	2.4	1.5	1.1	2.3
Textile Mill Products Total	1.7	1.6	2.0	1.3	1.0	2.1	1.8	1.3	3.0
Apparel	3.5	0.9	9.7	3.3	1.0	9.1	3.9	1.0	10.3
Paper & Allied Products	1.0	0.9	1.3	0.9	0.7	1.1	1.0	0.8	1.3
Printing & Publishing	1.6	1.1	2.7	1.6	1.1	3.1	1.4	1.0	2.4
Chemicals & Allied Products	0.5	0.5	0.4	0.5	0.4	0.9	0.4	0.4	0.4
Petroleum Refining	0.4	0.5	0.0	0.6	0.8	0.1	0.5	0.7	0.0
Rubber & Plastics Products	2.2	1.6	3.7	1.5	1.2	2.2	1.1	0.9	1.7
Leather & Leather Products	1.8	1.2	3.3	1.2	0.7	2.5	2.3	1.4	4.5
Miscellaneous Manufacturing	1.1	0.6	2.1	0.9	0.6	1.9	1.4	0.8	2.9
Nonmanufacturing	.75.4	80.6	63.3	77.8	82.6	65.3	73.9	79.9	58.9
Contract Construction	25.1	34.5	2.1	27.3	36.9	2.5	28.0	38.5	2.3
Transportation & Public Utilities	3.8	4.2	3.0	3.9	4.4	2.7	4.2	4.9	2.5
Wholesale & Retail Trade	18.9	16.6	24.5	19.4	16.5	27.1	20.5	17.2	28.6
Finance, Insurance & Real Estate	2.9	2.1	5.0	3.0	2.2	5.0	2.7	2.0	4.4
Service	12.3	9.4	19.2	12.6	10.0	19.3	11.8	9.5	17.4
Mining and Agriculture	2.8	3.8	0.5	3.4	4.5	0.6	3.9	5.1	0.7
State Government	3.9	4.7	2.1	3.2	3.5	2.2	0.3	0.2	0.5
Nonclassifiable	5.7	5.3	6.9	5.0	4.6	5.9	2.5	2.5	2.5

* Payments made under state Regular U.I. program only.
Due to rounding, percentage totaled-may not equal 100 percent.

VII. Hours and Earnings/Labor Turnover

During 1978 the average weekly earnings of a manufacturing production worker in Massachusetts was $221.71. This was 89.3 percent of the average weekly pay of $249.27 paid to production workers nationwide. The Bay State worker was on the job slightly less time than his national counterpart, and he earned 63 cents less an hour. Workers in the Commonwealth's durable goods industries earned 11 percent less than did the country's average durable goods production worker; and the State's nondurable goods production workers, even though they worked the national average number of hours, earned only 92.4 percent of the average United States weekly wage for their industries.

While it is true that production workers in Massachusetts are paid less than are production workers in the country as a whole, it is not entirely due to workers here receiving less pay than elsewhere for equivalent work; it is also partly due to our industrial mix. For example, in the transportation equipment industry, the weekly earnings nationwide are one-fourth greater than those paid here. This is largely because only about 10 percent of that industry's workers here are in the rather well paying automotive industry (countrywide the percentage is greater). Massachusetts does not have any large steel mills, in which wages are also high, so earnings in the primary metals industry here is comparatively low. It should be pointed out, however, that the two industries that have the highest nation-over-state earnings difference are lumber and primary metals, which between them account for less than four percent of manufacturing employment in the Commonwealth. On the other hand, the instruments industry, in which wages are higher here than nationally, accounts for over eight percent of our manufacturing employment, and its percentage share is growing.

Labor turnover figures show some encouraging signs. Accession rates for most industries are greater than separation rates, especially in the durable goods sector. There were few layoffs in 1978, most separations were due to quits.

Table 23

Average Weekly Earnings

										U.S.	U. S. to Mass.
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1978	Difference (%)
Manufacturing	$126.62	$134.75	$146.37	$157.55	$165.98	$175.17	$190.16	$204.69	$222.71	$249.27	+11.9%
Durable Goods	137.08	145.93	159.08	172.22	182.52	191.52	206.15	222.36	240.72	270.44	+12.4
Ordnance	131.40	161.51	-	-	-	-	-	-	-	-	-
Lumber & Wood	114.73	119.25	129.87	132.99	134.61	138.62	151.32	161.95	176.73	223.28	+26.3
Furniture & Fixtures	106.09	112.32	122.53	131.66	139.29	150.51	155.52	165.50	180.42	183.92	+ 1.9
Stone, Clay, & Glass	150.15	160.32	180.84	195.99	203.01	197.85	224.19	243.20	272.41	262.91	- 3.5
Primary Metals	144.99	151.37	166.49	174.90	190.08	199.50	220.80	237.83	248.78	342.76	+37.8
Fabricated Metals	136.04	144.79	158.25	172.00	185.15	195.09	205.75	222.89	241.36	259.94	+ 7.7
Machinery (Ex. Elec.)	150.18	159.17	173.47	186.54	198.34	205.64	214.87	227.81	249.23	283.92	+13.9
Electrical Machinery	124.89	138.80	145.56	154.37	164.01	174.05	184.71	200.94	216.15	234.95	+ 8.7
Transportation Equipment	154.77	165.59	179.86	192.78	196.09	201.84	219.64	253.44	264.60	333.01	+25.9
Instruments	137.97	145.89	154.16	178.50	192.70	203.41	231.68	244.18	265.85	233.13	-12.3
Nondurable Goods	117.20	125.39	135.19	143.81	149.77	158.95	173.11	185.55	201.33	217.88	+ 8.2
Food	128.80	135.72	147.86	153.27	161.28	183.77	195.71	209.48	225.92	230.84	+ 2.2
Textiles	110.02	116.64	129.27	137.28	141.40	153.34	163.15	177.23	189.32	173.32	- 8.5
Apparel	84.81	90.85	98.26	105.14	107.88	115.60	125.51	134.41	149.80	140.26	- 6.4
Paper	136.85	145.61	159.87	170.77	178.45	186.04	204.16	222.31	247.72	279.71	+12.9
Printing	143.63	157.03	169.86	177.93	183.33	190.99	206.09	221.41	234.84	243.27	+ 3.6
Chemicals	157.25	168.45	177.21	192.85	201.48	216.32	240.10	262.18	280.11	293.72	+ 4.9
Rubber	127.72	137.76	146.97	154.95	163.21	172.06	190.70	204.09	217.62	224.40	+ 3.1
Leather	98.09	103.04	108.25	113.83	118.30	125.94	131.76	136.10	145.67	144.69	- 0.7
Miscellaneous	115.31	122.10	129.51	134.15	138.65	147.38	162.01	174.28	189.94	181.97	- 4.2

Table 24

Average Hourly Earnings

	1970	1971	1972	1973	1974	1975	1976	1977	1978	U.S. 1978	U. S. to Mass. Difference (Hours)
Manufacturing	$3.23	$3.42	$3.65	$3.89	$4.16	$4.48	$4.79	$5.13	$5.54	$6.17	+11.4%
Durable Goods	3.41	3.63	3.88	4.14	4.43	4.80	5.09	5.45	5.90	6.58	+11.5
Ordnance	3.07	3.78	-	-	-	-	-	-	-	-	-
Lumber & Wood	2.98	3.13	3.33	3.41	3.58	3.84	3.88	4.10	4.52	5.61	+24.1
Furniture & Fixtures	2.77	2.88	3.11	3.35	3.59	3.94	4.05	4.31	4.65	4.68	+ 0.7
Stone, Clay and Glass	3.86	4.10	4.40	4.70	5.05	5.29	5.69	6.08	6.58	6.32	- 4.0
Primary Metals	3.58	3.71	3.89	4.03	4.40	4.75	5.22	5.48	5.68	8.20	+44.4
Fabricated Metals	3.31	3.54	3.75	4.00	4.44	4.77	4.97	5.41	5.83	6.34	+ 8.8
Machinery (Ex. Elec.)	3.69	3.93	4.17	4.41	4.70	5.09	5.19	5.45	5.92	6.76	+14.2
Electrical Machinery	3.13	3.47	3.63	3.84	4.09	4.44	4.70	5.10	5.50	5.83	+ 6.0
Transportation Equipment	4.02	4.29	4.60	4.76	4.89	5.27	5.72	6.40	7.00	7.91	+13.0
Instruments	3.39	3.62	3.76	4.24	4.61	5.01	5.49	5.80	6.27	5.70	- 9.1
Nondurable Goods	3.06	3.24	3.44	3.65	3.88	4.15	4.45	4.77	5.11	5.53	+ 8.2
Food	3.22	3.41	3.66	3.91	4.20	4.70	4.98	5.29	5.62	5.80	+ 3.2
Textiles	2.73	2.88	3.10	3.30	3.50	3.74	3.96	4.24	4.54	4.29	- 5.5
Apparel	2.57	2.68	2.84	3.03	3.23	3.42	3.67	3.93	4.28	3.94	- 7.9
Paper	3.22	3.41	3.65	3.89	4.15	4.44	4.77	5.17	5.63	6.52	+15.8
Printing	3.83	4.21	4.47	4.67	4.85	5.19	5.57	5.92	6.18	6.47	+ 4.7
Chemicals	3.78	4.03	4.27	4.57	4.82	5.20	5.61	6.14	6.56	7.01	+ 6.9
Rubber	3.10	3.36	3.55	3.77	4.02	4.28	4.64	4.99	5.36	5.50	+ 2.6
Leather	2.74	2.80	2.91	3.06	3.25	3.46	3.60	3.77	3.98	3.90	- 2.0
Miscellaneous	2.89	3.03	3.19	3.28	3.51	3.75	4.02	4.39	4.69	4.69	-

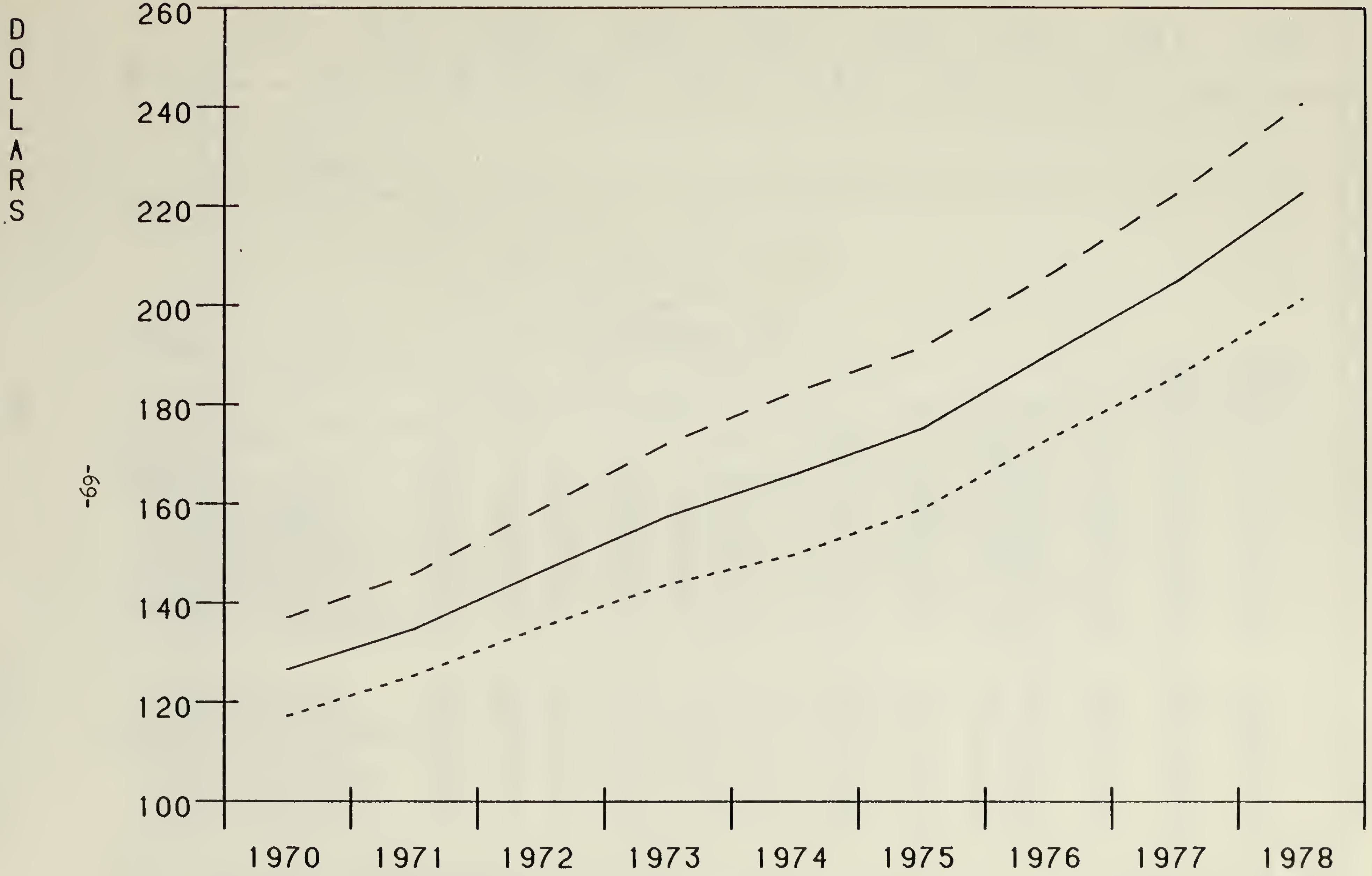
Table 25

Average Weekly Hours

	1970	1971	1972	1973	1974	1975	1976	1977	1978	U.S. 1978	U. S. to Mass. Difference (Hours)
Manufacturing	39.2	39.4	40.1	40.5	39.9	39.1	39.7	39.9	40.2	40.4	+0.2
Durable Goods	40.2	40.2	41.0	41.6	41.2	39.9	40.5	40.8	40.8	41.1	+0.3
Ordnance	42.8	42.7	-	-	-	-	-	-	-	-	-
Lumber & Wood	38.5	38.1	39.0	39.0	37.6	36.1	39.0	39.5	39.1	39.8	+0.7
Furniture & Fixturers	38.3	39.0	39.4	39.3	38.8	38.2	38.4	38.4	38.8	39.3	+0.5
Stone, Clay, and Glass	38.9	39.1	41.1	41.7	40.2	37.4	39.4	40.0	41.4	41.6	+0.2
Primary Metals	40.5	40.8	42.8	43.4	43.2	42.0	42.3	43.4	43.8	41.8	-2.0
Fabricated Metals	41.1	40.9	42.2	43.0	41.7	40.9	41.4	41.2	41.4	41.0	-0.4
Machinery (Ex. Elec.)	40.7	40.5	41.6	42.3	42.2	40.4	41.4	41.8	42.1	42.0	-0.1
Electrical Machinery	39.9	40.0	40.1	40.2	40.1	39.2	39.3	39.4	39.3	40.3	+1.0
Transportation Equipment	38.5	38.6	39.1	40.5	40.1	38.3	38.4	39.6	37.8	42.1	+4.3
Instruments	40.7	40.3	41.0	42.1	41.8	41.6	42.2	42.1	42.4	40.9	-1.5
Nondurable Goods	38.3	38.7	39.3	39.4	38.6	38.3	38.9	38.9	39.4	39.4	-
Food	40.0	39.8	40.4	39.2	38.4	39.1	39.3	39.6	40.2	39.8	-0.4
Textiles	40.3	40.5	41.7	41.6	40.4	41.0	41.2	41.8	41.7	40.4	-1.3
Apparel	33.0	33.9	34.6	34.7	33.4	33.8	34.2	34.2	35.0	35.6	+0.6
Paper	42.5	42.7	43.8	43.9	43.0	41.9	42.8	43.0	44.0	42.9	-1.1
Printing	37.5	37.3	38.0	38.1	37.8	36.8	37.0	37.4	38.0	37.6	-0.4
Chemicals	41.6	41.8	41.5	42.2	41.8	41.6	42.8	42.7	42.7	41.9	-0.8
Rubber	41.2	41.0	41.4	41.1	40.6	40.2	41.1	40.9	40.6	40.8	+0.2
Leather	35.8	36.8	37.2	37.2	36.4	36.4	36.6	36.1	36.6	37.1	+0.5
Miscellaneous	39.9	40.3	40.6	40.9	39.5	39.3	40.3	39.7	40.5	38.8	-1.7

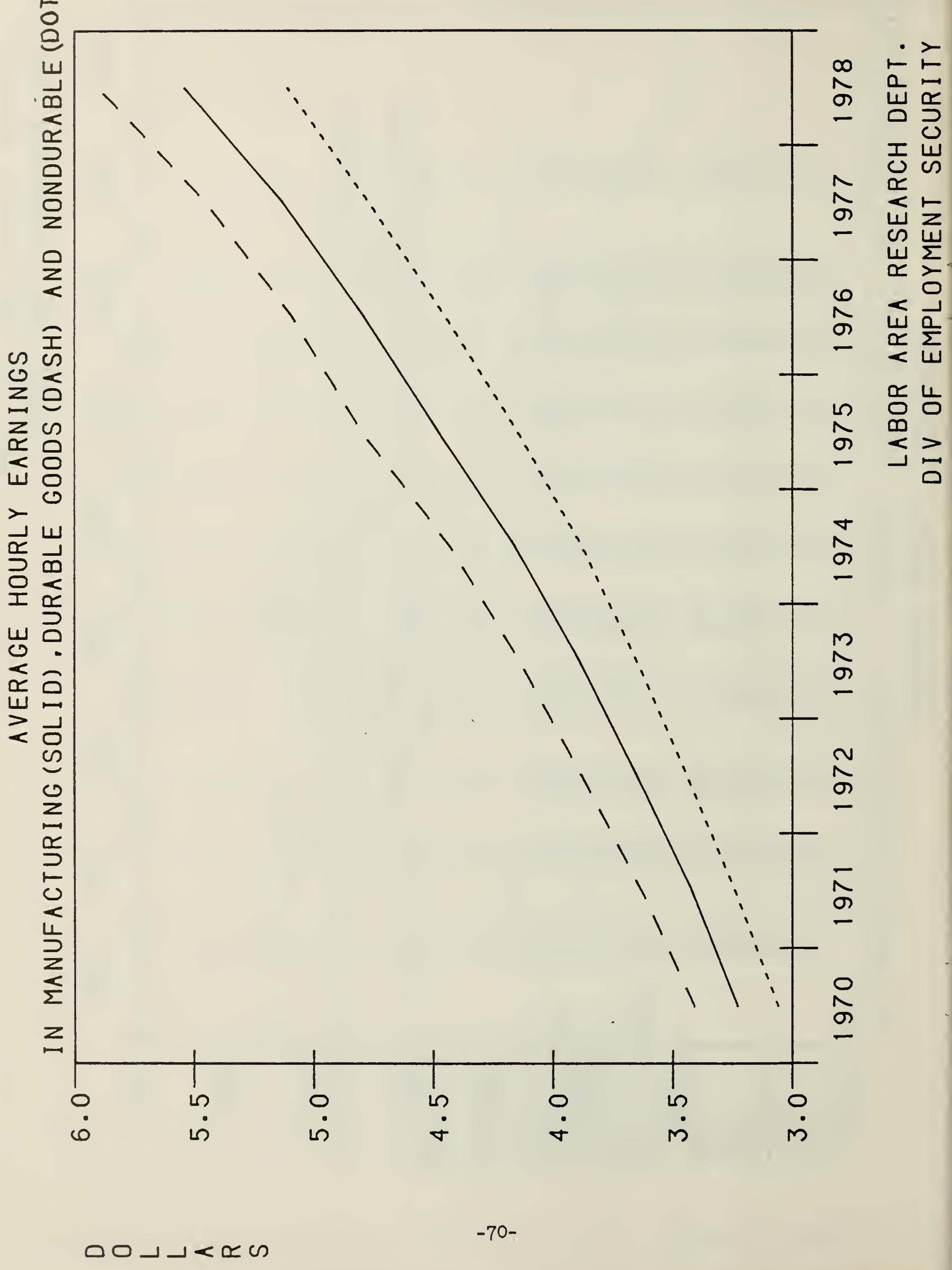
Chart 8

AVERAGE WEEKLY EARNINGS
IN MANUFACTURING(SOLID), DURABLE GOODS(DASH) AND NONDURABLE(DOT



LABOR AREA RESEARCH DEPT.
DIV. OF EMPLOYMENT SECURITY

Chart 9



AVERAGE HOURLY EARNINGS
IN MANUFACTURING(SOLID),DURABLE GOODS(DASH) AND NONDURABLE(DOT)

LABOR AREA RESEARCH DEPT.
DIV OF EMPLOYMENT SECURITY

Table 26

Accession Rates (1978)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1978 Annual Average	1978 U.S. Annual Average
Total Manufacturing	3.8	2.8	3.6	3.5	4.3	4.7	4.5	4.6	4.8	4.0	3.1	2.5	3.9	4.1
Durable Goods	3.0	2.2	3.0	2.9	3.5	3.9	3.0	3.7	3.5	3.3	2.6	2.2	3.1	3.8
Lumber and Wood Products	11.9	5.7	10.5	10.9	15.3	8.2	8.0	10.2	7.3	8.8	5.4	3.9	8.8	6.0
Furniture and Fixtures	3.8	3.5	4.4	5.4	5.2	4.7	11.6	12.3	5.6	6.0	3.5	2.9	5.7	5.8
Stone, Clay, and Glass	1.9	1.8	1.9	3.5	3.5	5.1	2.3	2.6	2.8	2.7	2.2	1.6	2.7	4.1
Primary Metal Products	2.8	1.8	2.7	2.2	3.7	3.3	2.7	5.4	2.4	3.4	2.4	1.8	2.9	2.9
Fabricated Metal Products	4.7	2.6	3.5	3.4	3.8	4.2	3.7	4.8	4.5	4.6	3.1	2.7	3.8	4.1
Machinery Except Electrical	2.0	1.8	2.6	2.2	2.6	3.1	2.3	2.8	3.0	2.7	2.6	2.4	2.5	3.0
Electrical Machinery	2.9	2.4	3.1	2.6	3.0	3.7	2.7	3.1	3.3	3.4	2.5	2.1	2.9	3.5
Transportation Equipment	2.2	1.6	2.4	4.4	3.7	4.5	2.8	2.5	2.5	1.8	1.6	1.2	2.6	3.6
Instrument and Related Products	2.5	2.4	2.6	2.2	3.7	4.3	2.5	3.1	4.2	3.1	2.6	2.2	3.0	2.8
Nondurable Goods	4.8	3.5	4.3	4.2	5.4	5.8	6.6	5.8	6.4	5.0	3.8	2.9	4.9	4.5
Food and Kindred Products	3.8	3.7	3.5	4.9	6.0	5.6	6.5	5.6	9.8	4.6	3.8	2.7	5.0	6.4
Textile Mill Products	3.9	4.2	4.8	4.4	5.3	5.9	10.3	7.4	6.3	4.4	3.6	3.2	5.3	4.6
Apparel and Other Textile Prods.	4.6	4.3	4.6	5.3	4.8	4.1	5.7	6.0	5.2	3.8	2.8	2.9	4.5	5.6
Paper and Allied Products	1.9	1.9	2.3	2.1	3.7	4.2	3.3	4.2	3.6	2.8	2.7	2.0	2.9	2.9
Printing and Publishing	2.6	2.7	4.0	3.2	4.7	7.3	3.3	3.1	5.3	4.8	3.2	1.5	3.8	3.5
Chemicals and Allied Products	4.7	1.2	1.6	1.4	3.2	3.4	2.4	1.4	1.8	2.1	2.2	1.3	2.2	1.8
Rubber and Plastics, NEC	5.1	3.7	5.1	4.9	7.1	7.5	6.6	6.0	6.4	6.9	6.5	4.3	5.8	5.0
Leather and Leather Products	15.3	5.6	5.9	6.0	8.2	6.8	16.4	11.5	9.3	8.0	5.4	7.2	8.8	7.3
Miscellaneous Nondurable Goods	4.4	3.5	6.0	5.1	5.8	6.9	8.3	7.4	9.9	7.8	4.3	1.7	5.9	5.8

Source: Occupation/Industry/Research Department

Table 27

Separation Rates 1978

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1978 Annual Average	1978 U.S. Annual Average
Total Manufacturing	3.1	2.4	3.0	2.9	3.1	3.3	5.2	4.8	4.7	3.6	3.3	3.4	3.6	3.8
Durable Goods	2.3	1.9	2.3	2.2	2.5	2.6	3.5	3.9	3.4	2.5	2.4	2.4	2.7	3.4
Lumber and Wood Products	6.0	5.4	6.0	5.4	11.5	11.2	11.3	11.4	10.9	8.2	5.7	14.9	9.0	5.9
Furniture and Fixtures	3.7	3.7	4.0	4.6	4.1	5.2	18.0	6.4	6.0	5.0	5.4	4.1	5.9	5.7
Stone, Clay and Glass	1.9	2.6	1.4	1.4	1.5	2.1	1.5	4.5	2.4	1.9	1.9	1.4	2.0	4.0
Primary Metal Products	2.3	1.5	4.1	1.9	2.0	2.2	4.1	4.4	3.5	2.0	2.0	1.6	2.6	2.5
Fabricated Metal Products	2.8	2.4	3.0	2.7	4.9	2.9	4.8	4.7	4.2	3.3	2.7	2.3	3.4	3.9
Machinery Except Electrical	1.7	1.6	1.8	1.7	1.7	1.8	3.3	3.4	2.5	1.8	1.9	1.6	2.1	2.5
Electrical Machinery	2.3	1.8	2.3	2.3	2.1	2.6	2.8	3.5	3.3	2.6	2.3	2.4	2.5	3.2
Transportation Equipment	2.3	1.3	1.5	2.2	1.4	2.1	1.8	2.4	3.0	1.7	1.8	3.4	2.1	3.0
Instrument and Related Products	2.1	2.1	2.4	1.7	2.1	2.7	2.6	4.1	3.7	2.7	2.5	2.3	2.6	2.5
Nondurable Goods	4.0	3.0	3.7	3.7	3.9	4.3	7.4	6.1	6.3	5.0	4.5	4.8	4.7	4.5
Food and Kindred Products	3.4	2.7	3.8	4.1	3.8	4.4	6.0	5.2	6.6	5.1	3.8	4.2	4.4	6.3
Textile Mill Products	4.1	3.9	4.9	5.0	4.9	4.6	10.6	7.6	6.5	5.2	5.9	3.7	5.6	4.7
Apparel and Other Textile Prods.	4.5	3.5	4.7	3.9	3.4	3.8	8.3	5.0	5.4	3.9	4.9	5.1	4.7	5.8
Paper and Allied Products	2.6	1.7	2.1	2.1	2.3	2.2	3.4	4.3	4.2	3.1	2.8	3.6	2.9	2.8
Printing and Publishing	3.3	2.0	2.4	2.5	2.5	3.7	5.5	5.1	5.1	3.5	3.5	2.1	3.4	3.2
Chemicals and Allied Products	2.6	0.8	1.8	1.6	1.3	1.2	1.9	3.1	2.9	1.5	1.0	1.1	1.7	1.7
Rubber and Plastics, NEC	5.1	3.6	3.7	4.2	4.9	6.2	6.2	7.4	7.4	6.8	6.4	4.3	5.5	4.8
Leather and Leather Products	6.6	5.4	5.5	5.6	7.2	7.1	18.8	10.5	10.3	10.3	7.1	14.1	9.0	7.6
Miscellaneous Nondurable Goods	4.2	3.4	4.5	4.6	5.3	4.7	7.6	7.2	8.8	6.4	5.0	6.6	5.7	5.8

Source: Occupation/Industry/Research Department

VIII. Labor Supply/Demand Imbalance

The Employment Service Automated Reporting System (ESARS) reported 100,562 active applicants on file in all Massachusetts Employment Services as of March 1979. The following table presents the ratio of those active applicants to the unfilled job openings in the Massachusetts Job Banks for the same time period. The ratios have been calculated by occupational category to aid educational and training planners to where the occupational demands are located.

The data should be reviewed, with a few limitations. The job bank openings refer only to jobs that are listed with the Division of Employment Security. A substantial number of job opening are never received by Job Bank. Many of the Massachusetts firms advertize their openings in newspapers or through private employment agencies. Although this fact exists, the ratios produced still provide vital information on the supply/demand of certain occupation.

There are many reasons why certain occupations are hard to fill. The general consensus is that there are not enough trained or experienced workers for the specific skills needed by many employers. While it would be unwise to make any hard and fast rules, generally the reasons job orders that are placed with the Employment Service go unfilled are because of such things as: low pay, inconvenient location, unsuitable working conditions, transportation problems, and/or the workers don't possess the required skills for the job.

Survey information on the following occupations by Labor Market Area is available through the Labor Area Research Department of the Division of Employment Security:

Boston SMSA:
- Computer Programmers and Operators
- Electronic Technicians
- Bookkeepers
- Insurance Adjusters and Examiners
- Keypunch Operators
- Secretary, Legal and Medical
- Typists
- Clerical Lab. Technicians
- Dental Hygienists
- Licensed Practical Nurses
- Sales Representatives, Wholesale Trade
- Air Conditioning, Heating, Refrigeration Mechanics
- Data Processing Machine Repair Persons

Continued Page 2

Brockton SMSA:	Licensed Practical Nurses Machinist/Tool and Die Makers Typists
Fall River LMA:	Cooks and Chefs General Clerical Secretaries Licensed Practical Nurses Sewers/Stitchers Machinists/Tool and Die Makers
Fitchburg-Leominster LMA:	Licensed Practical Nurses Machinists Cooks/Chefs
Lawrence-Haverhill SMSA:	Licensed Practical Nurses Machinists Sheet Metal Workers
Lowell LMA:	Licensed Practical Nurses Machinists Assemblers
New Bedford LMA:	Licensed Practical Nurses Sewers/Stitchers Checkers/Examiners
Pittsfield LMA:	Licensed Practical Nurses Machinists Cooks/Chefs
Springfield/Chicopee-Holyoke LMA:	Clerical Workers Welders Licensed Practical Nurses Machine Operators/Machinists
Worcester LMA:	Licensed Practical Nurses Machinists/Machine Tool Operators Clerk-Typists

Table 28

Unfilled Job Openings by Occupational Category
Composition of Active Job Applicants
MASSACHUSETTS
March 1979

	Major Occupational Category Selected Occupational Group	Total Applicants*	Unfilled Job Openings #	Ratio of Applicants to Openings
00, 01	PROFESSIONAL, TECHNICAL & MANAGERIAL WORK	14,930	3,588	4/1
01	Architecture & Engineering	1,094	143	8/1
02	Mathematics & Physical Sciences	346	119	3/1
04	Life Sciences	862	340	3/1
05	Social Sciences	118	27	4/1
07	Medicine & Health	1,914	296	6/1
09	Education	1,515	396	4/1
10	Museum, Library & Archival Sciences	129	95	1/1
11	Law & Jurisprudence	126	18	7/1
13	Writing	244	17	14/1
14	Art	550	51	11/1
15	Entertainment & Recreation	450	67	7/1
16	Administrative Specializations	2,878	667	4/1
18	Managers & Officials, N.E.C.	3,338	532	6/1
19	Professional, Technical & Managerial	1,366	820	2/1
2	CLERICAL & SALES WORK	24,951	4,962	5/1
20	Stenography, Typing, Filing & Related Occupations	8,975	2,486	4/1
21	Computing & Account-Recording	7,399	973	8/1
22	Material & Production Recording	1,844	315	6/1
23	Information & Message Distribution	1,441	296	5/1
24	Miscellaneous Clerical	859	301	3/1
25	Sales Agent, Services	564	68	8/1
26-7-8	Sales Agent & Salespersons, Commodities	2,275	241	9/1
29	Merchandising Occupations, Exc. Sales	1,594	282	6/1
3	SERVICES	18,575	3,653	5/1
30	Domestic Service	1,733	112	15/1
31	Food & Beverage Preparation & Service	7,439	901	8/1
32	Lodging & Related Service	774	167	5/1
33	Barbering, Cosmetology, Related Service	795	16	50/1
34	Amusement & Recreation Service	139	3	46/1
35	Miscellaneous Personal Service	3,989	886	4/1
36	Apparel & Furnishings Service	587	86	7/1
37	Protective Service	1,139	684	2/1
38	Building & Related Service	1,980	798	2/1
4	FARMING, FISHERY, FORESTRY, & RELATED WORK	2,110	776	3/1
40	Plant Farming	1,685	610	3/1
41	Animal Farming	164	19	9/1
42	Miscellaneous Farming & Related	50	4	13/1
44	Fishery & Related	90	4	23/1
45	Forestry	121	139	1/1

Table 28

Continued Page 2

Unfilled Job Openings by Occupational Category
Composition of Active Job Applicants
MASSACHUSETTS

March 1979

	Major Occupational Category Selected Occupational Group	Total Applicants *	Unfilled Job Openings#	Ratio of Applicants to Openings
5	PROCESSING	2,049	499	4/1
50	Processing of Metal	205	73	3/1
51	Ore Refining & Foundry	93	35	3/1
52	Processing of Food, Tobacco, Rel. Prod.	473	70	7/1
53	Processing of Paper & Related Material	43	4	11/1
54	Manufacturing of Petroleum, Coal, Natural & Manufactured Gas & Rel. Prod.	9	2	5/1
55	Chemicals, Plastics, Synthetics, Rubber Paint, & Related Products	680	150	4/1
56	Processing of Wood and Wood Prod.	11	3	4/1
57	Stone, Clay, Glass, & Related Products	140	37	4/1
58	Leather, Textiles, & Related Products	294	93	3/1
59	Processing Occupations, N.E.C.	101	32	3/1
6	MACHINE TRADES	6,149	1,715	4/1
60	Metal Machining	1,121	482	2/1
61	Metalworking Occupations, N.E.C.	1,163	311	4/1
62, 63	Mechanics & Machinery Repairers	1,893	437	4/1
64	Paperworking	204	45	4/1
65	Printing	381	88	4/1
66	Wood Machining	196	55	4/1
67	Machining Stone, Clay, Glass, & Rel. Materials	14	1	14/1
68	Textile	387	170	2/1
69	Machine Trades Occupations, N.E.C.	790	126	6/1
7	BENCH WORK	6,702	1,501	4/1
70	Fabrication, Assembly, & Repair of Metal Products, N.E.C.	909	137	7/1
71	Fabrication & Repair of Scientific & Medical Apparatus & Related Products	355	48	7/1
72	Assembly & Repair of Electrical Equip.	1,997	520	4/1
73	Fabrication & Repair of Products Made from Assorted Materials	507	75	7/1
74	Painting, Decorating, & Rel. Occupations	213	33	6/1
75	Fabrication & Repair of Plastics Synthetics, Rubber & Related Products	130	28	5/1
76	Fabrication & Repair of Wood Products	180	82	2/1
77	Fabrication & Repair of Sand, Stone, Clay & Glass Products	65	3	22/1
78	Fabrication & Repair of Textile, Leather & Related Products	2,261	563	4/1
79	Bench Work Occupations, N.E.C.	85	12	7/1

Table 28

Continued Page 3
Unfilled Job Openings by Occupational Category
Composition of Active Job Applicants
MASSACHUSETTS
March 1979

	Major Occupational Category Selected Occupational Group	Total Applicants*	Job Openings#	Ratio or Applicants to Openings
8	STRUCTURAL WORK	10,620	2,460	4/1
80	Metal Fabricating, N.E.C.	756	159	5/1
81	Welders, Flame Cutters & Related Work	681	95	7/1
82	Electrical Assembling, Installing, & Repairing	879	164	5/1
84	Painting, Plastering, Waterproofing, Cementing and Related Works	855	166	5/1
85	Excavating, Grading, Paving, & Rel. Work	396	22	18/1
86	Construction Occupations, N.E.C.	5,960	1,245	5/1
89	Structural Work Occupations, N.E.C.	1,093	609	2/1
9	MISCELLANEOUS WORK	14,476	2,361	6/1
90	Motor Freight	2,979	351	8/1
91	Transportation Occupations, N.E.C.	1,210	238	5/1
92	Packaging & Materials Handling	9,607	1,584	6/1
95	Production & Distribution of Util.	152	81	2/1
96	Amusement, Recreation & Motion Picture Occupations, N.E.C.	57	7	8/1
97	Graphic Art Work	471	50	9/1
	GRAND TOTALS	100,562	21,465	5/1

* Source: Table 96 ESARS March 1979

# Source: Unfilled Job Openings: Job Bank March 1979

Table 29 E.S. Job Bank Job Openings By Job Bank Area
By Occupational Category By Average Pay
March 1979

Occupational Category	Massachusetts	Boston-Metro	Lawrence	Springfield	Taunton	Worcester
		Average Pay				
Total All Openings	$ 8,245.00/yr	$ 8,828.00/yr	$8,152.00/yr	$8,169.00/yr	$7,194.00/yr	$7,994.00/yr
Professional, Technical, And Managerial	10,294.00/yr	12,032.00/yr	9,394.00/yr	9,863.00/yr	9,614.00/yr	9,704.00/yr
Clerical And Sales	7,537.00/yr	7,767.00/yr	7,594.00/yr	7,386.00/yr	7,331.00/yr	7,402.00/yr
Service	3.62/hr	3.66/hr	3.57/hr	3.65/hr	3.68/hr	3.44/hr
Farming, Fishery, Forestry, And Related	3.77/hr	4.30/hr	3.91/hr	3.44/hr	3.82/hr	3.78/hr
Processing	3.79/hr	3.86/hr	3.74/hr	4.27/hr	3.50/hr	3.58/hr
Machine Trades	4.09/hr	4.45/hr	3.90/hr	4.07/hr	3.92/hr	4.05/hr
Bench Work	3.42/hr	3.73/hr	3.36/hr	3.27/hr	3.22/hr	3.35/hr
Structural Work	4.32/hr	4.61/hr	4.36/hr	4.17/hr	4.05/hr	4.46/hr
Miscellaneous	3.60/hr	3.80/hr	3.53/hr	3.57/hr	3.46/hr	3.54/hr

Source: Employment And Training Administration
U.S. Department Of Labor

Table 30
Job Bank Openings
Average Pay by Occupational Category
Massachusetts Job Banks
December 1978

Job Title	State		Lawrence		Boston Metro		Springfield		Taunton		Worcester	
	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay
TOTAL ALL OCCUPATIONS	23,788	$ 7,924	4,409	$ 8,226	7,534	$ 8,233	2,815	$ 7,839	5,010	$ 7,623	4,020	$ 7,454
Professional, Technical and Managerial	3,325	10,640	333	9,732	1,379	11,431	420	10,227	820	10,062	391	10,199
Aeronautical Engineering	1	14,560	--	--	--	--	1	14,560	--	--	--	--
Elec. & Electronics Eng.	119	13,639	15	11,845	58	14,785	11	13,072	17	12,394	18	13,092
Civil Engineering	28	14,913	2	21,082	15	15,697	1	16,260	3	15,029	7	11,230
Mechanical Engineering	79	14,077	12	13,363	28	14,965	8	16,865	9	15,631	22	11,656
Chemical Engineering	5	15,800	1	9,000	2	18,000	--	--	1	16,000	1	18,000
Architecture & Engineering	155	13,530	13	12,540	73	14,830	20	13,692	27	12,263	22	11,220
Mathematics & Physical Sciences	100	13,851	5	11,293	58	15,140	11	11,866	16	12,968	10	11,244
Life Sciences	191	9,771	24	9,450	42	10,399	27	9,270	71	9,897	27	9,269
Social Sciences	19	15,783	2	14,200	11	17,135	1	9,000	4	12,500	1	24,000
Medicine and Health	467	10,262	25	9,397	142	11,108	45	10,852	226	9,787	29	9,290
Education	277	9,877	13	8,200	110	10,687	32	9,807	74	9,922	48	9,992
Museum, Library and Archival Sciences	58	9,328	5	8,289	17	9,925	20	8,658	8	10,079	8	9,680
Law & Jurisprudence	6	10,462	--	--	3	11,614	--	--	3	9,310	--	--
Writing	29	11,918	1	6,240	15	13,352	4	9,615	7	11,389	2	10,464
Art	38	9,386	2	9,322	24	9,957	4	9,557	4	7,592	4	7,618
Entertainment & Recreation	38	7,903	2	9,668	2	9,160	13	8,655	12	6,692	9	7,760
Administrative Specializations	570	10,546	133	9,045	268	11,328	60	10,974	61	10,161	48	10,272
Managers & Officials n.e.c.	497	10,126	37	9,128	144	11,432	89	9,202	149	9,635	78	10,131
Misc. Professional, Tech. Management	636	9,640	40	9,999	363	9,579	69	9,162	109	10,286	55	9,077

Table 30 (con't)
Job Bank Openings
Average Pay by Occupational Category
Massachusetts Job Banks
December 1978
(continued)

	State		Lawrence		Boston Metro		Springfield		Taunton		Worcester	
	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay
Clerical and Sales	4,684	$ 7,134	647	$ 7,072	1,950	$ 7,494	551	$ 6,749	650	$ 7,002	886	$ 6,768
Steno. Typing, Filing & Related	2,090	7,335	261	7,509	1,122	7,430	189	6,999	248	7,081	270	7,245
Computing & Account Recording	1,012	6,925	129	6,720	337	7,671	74	6,890	158	6,760	314	6,299
Production and Stock Clerks	478	7,044	76	7,130	174	7,429	52	6,138	69	6,671	107	7,041
Information and Message Distribution	251	7,038	44	6,733	101	7,022	48	7,380	32	7,285	26	6,702
Miscellaneous Clerical	176	7,275	32	7,123	57	7,389	27	7,430	43	6,799	17	8,134
Sales Occupations, Services	60	9,438	3	10,800	25	9,609	7	7,161	18	10,315	7	8,261
Salesperson, Consumable Commodities	65	6,341	16	5,935	21	6,123	5	8,931	15	5,796	8	7,178
Salesperson, Commodities n.e.c.	302	6,705	46	6,721	59	7,447	125	6,121	33	7,303	39	6,951
Misc. Sales Occupations	250	6,623	40	6,144	54	7,784	24	6,340	34	6,698	98	6,219
Service	4,045	3.33/hr.	562	3.38/hr.	1,019	3.28/hr.	594	3.35/hr	1,214	3.45/hr.	656	3.13/hr.
Domestic Service	131	3.17	17	3.03	64	3.32	12	3.24	19	2.93	19	2.90
Food & Beverage Prep.	1,342	3.11	192	3.06	486	3.20	141	3.13	196	3.05	327	3.03
Lodging & Related Services Occupations	308	3.27	30	2.90	63	3.23	9	2.74	195	3.38	11	2.94
Barbering, Cosmetology	9	2.78	2	2.65	2	3.06	2	2.78	2	2.65	1	2.65
Amusement & Recreational	6	2.76	1	2.75	1	3.00	1	2.65	2	2.65	1	2.87
Misc. Personal Service	965	3.52	48	3.08	117	3.50	115	3.50	591	3.65	94	3.00
Apparel Furnishing Svc.	134	3.15	15	3.38	20	3.37	25	2.80	59	3.18	15	2.94
Protective Svc. Occup.	534	3.67	163	3.91	122	3.14	120	4.17	76	3.49	53	3.31
Buildings & Related Services	616	3.28	94	3.40	144	3.40	169	2.97	74	3.38	135	3.41

Table 30 (con't)
Job Bank Openings
Average Pay by Occupational Category
Massachusetts Job Banks
December 1978
(continued)

	State		Lawrence		Boston Metro		Springfield		Taunton		Worcester	
	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay
Farming, Fishery, Forestry & Related	269	3.70/hr.	14	3.68/hr.	20	3.27/hr.	63	3.34/hr.	87	3.89/hr.	85	3.87/hr.
Plant Farming Occup.	219	3.68	9	3.73	19	3.27	52	3.28	60	3.84	79	3.91
Animal Farming Occup.	20	3.49	4	3.51	1	3.25	--	--	9	3.60	6	3.36
Misc. Agriculture & Related	9	3.61	1	4.00	--	--	1	2.65	7	3.69	--	--
Fishing & Related	1	4.37	--	--	--	--	--	--	1	4.37	--	--
Forestry Occupations	20	4.13	--	--	--	--	10	3.71	10	4.55	--	--
Processing	662	3.44	134	3.66	64	4.02	108	3.46	144	3.35	212	3.18
Processing of Metal	95	3.43	16	4.19	9	3.74	9	3.94	31	3.02	30	3.19
Ore Refining and Foundry	41	4.02	5	3.85	12	4.20	10	4.02	9	4.02	5	3.77
Proc. Food, Tobacco and Related	105	3.43	20	3.41	18	4.15	21	2.92	25	3.52	21	3.22
Proc. of Paper and Related	8	4.24	2	3.00	--	--	6	4.65	--	--	--	--
Petroleum, Coal, Natural and Mfg. Gas. Proc.	25	2.65	--	--	--	--	--	--	25	2.65	--	--
Chemicals, Plastics, Synthethics, Rubber, Paint Processing	242	3.38	57	3.69	15	3.86	25	3.44	21	3.96	124	3.07
Processing of Wood and Wood Products	5	3.62	4	3.77	--	--	--	--	1	3.00	--	--
Processing of Stone, Clay, Glass & Rel. Prod.	25	3.80	6	4.29	1	4.85	7	3.26	4	3.40	7	4.00
Processing Leather, Tex. and Related Products	95	3.35	22	3.30	3	3.11	28	3.25	25	3.53	17	3.36
Processing Occup. n.e.c.	21	3.70	2	3.15	6	4.36	2	4.40	3	3.30	8	3.33

Table 30 (con't)
Job Bank Openings
Average Pay by Occupational Category
Massachusetts Job Banks
December 1978
(continued)

	State		Lawrence		Boston Metro		Springfield		Taunton		Worcester	
	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay
Machine Trades	1,911	3.92/hr.	425	3.82/hr.	449	4.24/hr.	207	4.14/hr.	442	3.66/hr.	388	3.85/hr.
Metal Machining Occupations	492	4.28	103	4.47	146	4.31	59	4.42	72	4.26	112	3.99
Metalworking Occup. n.e.c.	336	3.59	73	3.46	91	4.11	24	4.21	108	3.16	40	3.45
Mechanics and Machinery Repairers	344	4.41	51	4.35	101	4.79	35	4.27	68	4.34	89	4.13
Mechanics and Machinery Repairmen	163	4.35	22	4.19	37	4.40	20	4.63	38	4.30	46.	4.31
Paperworking Occup.	44	3.25	2	2.88	--	--	19	3.26	9	3.26	14	3.28
Printing Occupations	122	3.48	10	3.16	36	3.50	14	4.16	34	3.40	28	3.31
Wood Machining Occup.	43	3.49	15	3.21	8	3.21	2	4.50	14	3.83	4	3.43
Machining Stone, Clay, Glass and Related	1	3.25	--	--	--	--	--	--	--	--	1	3.25
Textile Occupations	179	3.34	77	3.58	7	3.10	22	3.29	48	3.04	25	3.34
Machine Trades Occupations n.e.c.	187	3.42	72	3.28	23	3.45	12	4.27	51	3.34	29	3.56
Bench Work	1,896	3.24	353	3.13	337	3.66	148	3.21	683	3.11	375	3.21
Metal Prod. Fabric. Assembly	392	3.16	28	3.32	37	3.67	16	3.41	255	3.02	56	3.32
Fab./Rep. Scien., Med. Photo, Opt. Hor. Rel.	62	3.75	6	4.10	28	4.02	6	3.55	8	3.05	14	3.56
Assemb. & Rep. of Elec. Equipment	528	3.40	134	3.29	133	3.83	66	3.15	88	3.23	107	3.27
Fab./Rep. of Prod. made From Asst. Materials	153	3.07	10	2.83	14	3.21	23	3.33	58	3.08	48	2.95

Table 30 (con't)

Job Bank Openings
Average Pay by Occupational Category
Massachusetts Job Banks
December 1976
(continued)

	State		Lawrence		Boston Metro		Springfield		Taunton		Worcester	
	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay
Printing, Decorating, & Rel. Occup.	54	3.62/hr.	11	3.32/hr.	15	4.26/hr.	--	--	15	3.47/hr.	13	3.32/hr.
Plastics, Syn., Rubber, & Rel. Prod. Fab/Repair	49	3.23	8	3.10	4	3.29	--	--	18	3.18	19	3.32
Occup. in Fab./Repair of Wood Products	79	3.15	17	2.96	5	3.20	6	3.08/hr.	16	3.13	35	3.26
Fab./ Rep. of Sand, Stone, Clay, Glass Products	12	4.22	3	4.67	4	5.22	--	--	5	3.16	--	--
Fab./Repair of Textile Leather & Rel. Prod.	553	3.08	134	2.88	97	3.25	31	3.10/hr.	216	3.15	75	3.05
Bench Work Occup. n.e.c.	14	3.36	2	3.00	--	--	--	--	4	3.50	8	3.39
Structural Work	3,273	3.99	470	4.40	1,566	3.63	348	4.45	458	4.12	431	4.32
Occup. In Metal Fabrication n.e.c.	241	4.32	37	4.09	78	5.05	12	4.09	63	3.83	51	4.01
Welder, Cutters, & Related Occupations	126	4.45	31	4.11	33	5.28	8	4.07	31	3.84	23	4.65
Elec. Assem., Inst. and Repairing	204	4.95	28	4.52	78	5.05	24	5.88	26	4.75	48	4.68
Painting, Plastering, Waterpt., Cementing	118	3.04	19	5.28	41	4.55	16	5.64	20	4.92	22	5.42
Excavating, Grading, Paving & Rel. Occup.	19	5.59	6	5.00	4	5.88	--	--	3	6.32	6	5.63
Const. Occup. n.e.c.	2,226	3.76	298	4.48	1,234	3.31	226	4.36	265	4.13	203	4.29
Structural Work Occup. n.e.c.	339	4.04	51	3.95	98	4.38	62	3.98	50	3.81	78	3.89

Table 30 (con't)
Job Bank Openings
Average Pay by Occupational Category
Massachusetts Job Banks
December 1978
(continued)

	State		Lawrence		Boston Metro		Springfield		Taunton		Worcester	
	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay	Total Openings	Avail. Av. Pay
Miscellaneous	3,723	3.79/hr	1,471	4.37/hr.	750	3.61/hr.	376	3.46/hr.	530	3.16/hr.	596	3.32/hr.
Motor Frght. Occup.	464	4.09	109	4.25	169	3.91	45	4.47	61	4.01	80	4.12
Transp. Occup. n.e.c.	323	3.32	42	2.93	119	3.65	36	3.22	43	3.05	83	3.21
Packaging Materials Handling Occup.	2,824	3.79	1,313	4.42	432	3.48	269	3.29	393	2.96	417	3.19
Extraction of Minerals Occupation	2	4.00	2	4.00	--	--	--	--	--	--	--	--
Prod. & Dist. of Utilities	47	4.47	1	4.60	15	3.95	10	4.92	16	4.58	5	4.85
Amusement, Rec. & Motion Picture, Radio/TV Occupations n.e.c.	3	4.73	1	3.82	1	4.94	1	5.43	--	--	--	--
Graphic Art Work Occupations	60	3.34	3	4.58	14	3.49	15	2.97	17	3.66	11	2.82

Source: Employment and Training Administration Job Bank

THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

CHARACTERISTICS OF APPLICANTS ENROLLED IN TRAINING, BY SELECTED GROUPS

MASSACHUSETTS

Cumulative October 1, 1978 to March 31, 1979

CHARACTERISTICS OF APPLICANTS	ALL APPLICANTS		SELECTED GROUPS			
	No.	%	MINORITY	Economically Disadvantaged	VETERAN	
Age - All Ages	1951	100.0	448	1,426	306	
Under 20 years	392	20.1	143	224	11	
20 - 21	163	8.4	54	97	21	
22 - 24	227	11.6	40	166	36	
25 - 29	337	17.3	67	270	62	
30 - 39	501	25.8	103	418	80	
40 - 44	131	6.7	18	111	26	
45 - 54	157	8.0	19	118	44	
55 - 64	43	2.2	4	22	26	
65 years or older	0	0.0	0	0	0	
Sex -						
Men	867	44.4	211	506	295	
Women	1084	55.6	237	920	11	
Highest Grade of School Completed - All Grades						
0 - 7 years	98	5.0	40	84	7	
8 - 11	901	46.2	275	677	95	
12	735	37.7	109	536	132	
Over 12 years	217	11.1	24	129	72	
Handicapped	152	7.8	18	108	52	
Welfare	991	50.8	247	991	78	
Economically Disadvantaged	1426	73.1	351	1,426	138	

Source ESARS Table 04 series Report No. MA 5-46

Form 0233-C
New 4-75

Table 32

THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

CHARACTERISTICS OF APPLICANTS REGISTERED IN EMPLOYMENT SERVICE OFFICES, BY SELECTED GROUPS

MASSACHUSETTS

Cumulative October 1, 1978 to March 31, 1979

CHARACTERISTICS OF APPLICANTS	ALL REGISTERED APPLICANTS		SELECTED GROUPS		
	NUMBER	PERCENT	MINORITY	(1)*	VETERAN
Age - All Ages	249,721	100.0	35,404	102,822	37,870
Under 20 years	32,767	13.1	12,754	11,258	605
20 - 21	22,359	8.9	2,931	5,849	1,899
22 - 24	33,700	13.5	4,218	9,351	4,651
25 - 29	43,685	17.5	6,549	17,051	6,623
30 - 39	58,587	23.5	9,990	33,032	9,458
40 - 44	17,509	7.0	2,904	10,112	3,214
45 - 54	26,008	10.4	3,269	11,964	6,973
55 - 64	12,894	5.2	1,073	3,791	4,064
65 & Over	2,212	0.9	152	414	383
Sex -					
Men	126,185	50.5	16,026	40,154	36,363
Women	123,536	49.5	19,378	62,668	1,507
Highest Grade of School Completed					
0 - 7 years	11,907	4.8	4,949	8,163	840
8 - 11	76,607	30.7	14,484	43,134	8,775
12	99,709	39.9	10,939	37,693	17,356
Over 12 years	61,498	24.6	5,032	13,832	10,899
Handicapped	14,611	5.9	1,450	7,487	6,202
Welfare	74,988	30.0	17,683	75,475	6,456
Economically Disadvantaged	102,822	41.2	22,419	102,822	11,968

*1 Economically Disadvantaged

Source: ESARS Table 06 Series Report No. MA5-48

Form 0233-A
Rev. 10-77

Table 33

THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

JOB OPENINGS RECEIVED AND FILLED, BY MAJOR OCCUPATIONAL CATEGORY

MASSACHUSETTS
Cumulative October 1, 1978 to March 31, 1979

OCCUPATIONAL GROUP	OPENINGS 1/			
	RECEIVED		FILLED	
	Number	Percent	Number	Percent
All Occupational Groups	89,199	100.0	59,609	100.0
Professional, Technical, Managerial	16,514	18.5	11,079	18.6
Clerical	17,131	19.2	10,006	16.8
Sales	5,485	6.2	4,146	7.0
Domestic	1,504	1.7	1,169	2.0
Other Services	15,368	17.2	10,393	17.4
Farming, Fishing, Forestry	3,281	3.7	1,841	3.1
Processing Occupations	2,071	2.3	1,442	2.4
Machine Trades	5,072	5.7	2,856	4.8
Bench Work	5,260	5.9	3,304	5.5
Structural Work	6,667	7.5	5,171	8.7
Motor Freight Transportation	3,183	3.6	2,181	3.6
Packing, Material Handling	6,641	7.4	5,420	9.1
All Other	1,022	1.1	601	1.0

Source: ESARS Table A07 Group Report No. MA5-49A

1/ Total Agricultural and Nonagricultural Openings.

Form 0233-E2
New 8-76

Table 34

Applicants Placed in Special Class of Openings
MASSACHUSETTS

Characteristics of Applicants	CETA				WIN		Appren- -tice	YACC	
	Total	PSE	OJT	Work Exp.	PSE	OJT	Ship	Placed	Referred
Age - All Ages	7,909	5,351	194	1,322	55	461	61	224	351
Under 20 years									
20 - 21	616	418	27	34	7	32	11	62	102
22 - 24	935	689	54	2	7	62	23	46	65
25 - 29	1,103	854	41	5	12	121	7	2	2
30 - 39	1,067	807	31	2	11	159	4	0	0
40 - 44	291	233	9	1	3	34	0	0	0
45 - 54	476	416	4	5	8	21	1	0	1
55 - 64	330	310	4	0	1	4	1	0	0
65 years or older	23	22	0	0	0	0	0	0	0
Sex -									
Men	4,858	3,273	174	653	36	266	58	156	260
Women	3,051	2,079	20	669	19	195	3	68	91
Highest Grade of School Completed - All Grades									
0 - 7 years	254	186	3	41	1	19	0	2	2
8 -11	3,764	2,157	56	1,220	17	188	3	68	123
12	2,389	1,727	98	50	26	192	53	102	153
Over 12 years	1,502	1,281	37	11	11	62	5	52	73
Handicapped	406	307	23	3	6	29	1	6	9
Welfare	1,136	569	15	32	55	459	0	3	11
Economically Disadvantaged	4,267	2,934	110	680	15	450	1	36	72

IX. CETA Activities and the Need for Manpower Services

Individuals with low skill and educational levels are the most in need of manpower services. During the economic recession of 1974-1976 many skilled and educated people also needed help. The skilled and educated can be given public service employment during economic slowdowns as a short term remedy, it being presumed that they will be able to find work on their own in an improved and expanding job market. The unskilled and the undereducated, however, will probably always need some form of assistance.

Table 37 compared the age distrubution of the U. S. and Massachusetts population by race, and shows the poverty level in each age/race group at the time of the 1975 Survey of Income and Education. It can be seen that according to the Federal standards used for the Survey, most age/race segments in Massachusetts had fewer people living in poverty than did their national counterparts. However, since "poverty" is ascribed to be having an income below a certain dollar level, the comparison is somewhat misleading. The cost of living in the Commonwealth is higher than it is in most other states. So, while in 1978 the Bay State had the fourteenth highest per capita income among the states, when the dollar incomes were adjusted to take into account the states' costs of living, our ranking dropped to thirty-seventh.

Table 35

April 1979 Poverty Income Guidelines *

Size of Family Unit	One	Two	Three	Four	Five	Six
Nonfarm Family	$3,400	$4,500	$5,600	$6,700	$7,800	$8,900
Farm Family	2,910	3,840	4,770	5,700	6,630	7,560

For family units with more then six members, add $1,100 for each additional member in a nonfarm family, add $930 for each additional member in a farm family.

* Source: U. S. Department of Labor, Employment and Training Administration.

Rather than strictly using poverty income guidelines, a better gauge of need are the living standard income levels. This is because a dollar income with which a family could maintain a reasonably comfortable lifestyle in Austin, Texas, would be inadequate to do so in Boston. Therefore the income guidelines, or the Lower Living Standard Income Level (whichever is higher) is to be used in determining income eligibility for CETA. The Employment and Training Administration defines an economically disadvantaged person as someone who is a member of a family that (1) receives cash welfare payments; or (2) has a family income that, in relation to the family size and location, represents seventy percent of the lower living income level issued by the department's Bureau of Labor Statistics, or poverty levels established by the Office of Management and Budget, whichever is higher.

Table 36

CETA

Income Eligibility Levels*

Boston Prime Sponsor

Size of Family Unit	One	Two	Three	Four	Five	Six
Boston Lower Living Standard Income	$4,130	$6,770	$9,300	$11,480	$13,550	$15,840
70% Boston Lower Living Standard Income	2,900	4,740	6,510	8,040	9,490	11,090

*Source: E.T.A. Different eligibility income levels may be assigned to other Prime Sponsors.

It is estimated that there will be 487,146 economically disadvantaged people 18 years of age or older in the Commonwealth in fiscal year 1980. Some 13.5 percent are expected to be Nonwhite, and 2.2 percent Spanish.

Table 37

U. S. and Massachusetts
Age/Race Percentage Distribution and Percent of Population Segment in Poverty

	Total		White		Black		Other		Spanish	
	U.S.	Mass.	U.S.	Mass.	U.S.	Mass.	U.S.	Mass.	U.S.	Mass.
All Persons All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 16 Years	26.9	25.8	25.8	25.3	34.3	39.2	31.8	29.4	39.5	50.8
16 to 24 Years	16.8	16.9	16.5	17.1	18.4	13.7	17.4	11.7	17.0	10.8
25 to 44 Years	25.6	25.0	25.8	24.8	23.6	29.5	29.7	37.7	26.2	29.4
45 to 64 Years	20.5	21.2	21.1	21.5	16.3	13.8	14.9	19.0	13.0	7.8
65 Years and Over	10.3	11.0	10.7	11.3	7.4	3.8	6.2	2.5	4.2	1.2
Persons in Poverty All Ages	11.4	7.2	8.9	6.5	29.8	24.6	18.9	17.0	23.1	31.5
Under 16 Years	16.3	12.1	11.9	10.9	40.1	33.8	24.4	15.3	28.8	41.6
16 to 24 Years	12.2	8.0	9.5	7.3	29.1	28.1	24.1	31.9	21.7	17.7
25 to 44 Years	7.8	5.2	6.2	4.7	20.0	15.5	13.3	14.6	18.6	24.9
45 to 64 Years	7.7	3.6	6.3	3.3	20.9	13.2	13.8	17.1	15.6	15.7
65 Years and Over	14.0	5.9	12.1	5.6	34.8	29.7	14.8	-	25.5	-

Source: Spring 1976 Survey of Income and Education

Table 38

POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS

FISCAL YEAR 1980

MASSACHUSETTS

	Population	Labor Force	Employ	Unemploy	Unemploy Rate	Labor Force Participation Rate
TOTAL	5,785,000	2,826,430	2,659,671	166,759	5.9	65.7
White Male	2,598,965	1,514,836	1,431,328	83,508	5.5	80.0
0-15	705,684	-	-	-	-	-
16-17	110,940	74,509	65,858	8,651	11.6	67.2
18-19	110,940	81,778	74,429	7,349	9.0	73.7
20-24	254,407	213,549	197,174	16,375	7.7	83.9
25-34	324,418	316,284	299,475	16,809	5.3	97.5
35-44	281,296	275,670	265,050	10,620	3.9	98.0
45-64	559,835	493,170	475,697	17,473	3.5	88.1
65+	251,445	59,876	53,645	6,231	10.4	23.8
White Female	2,889,062	1,188,760	1,119,315	69,445	5.8	53.7
0-15	674,385	-	-	-	-	-
16-17	108,329	85,770	76,997	8,773	10.2	79.2
18-19	108,329	75,185	70,542	4,643	6.2	69.4
20-24	262,517	197,834	187,831	10,003	5.1	75.4
25-34	383,468	228,852	217,769	11,083	4.8	59.7
35-44	308,150	191,282	182,533	8,749	4.6	62.1
45-64	627,060	368,530	346,326	22,204	6.0	58.8
65+	416,824	41,307	37,317	3,990	9.7	9.9

Table 38

Con't Page 2

POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS

FISCAL YEAR 1980

MASSACHUSETTS

	Population	Labor Force	Employ	Unemploy	Unemploy Rate	Labor Force Participation Rate
Nonwhite Male	137,185	65,590	57,573	8,017	12.2	76.8
0-15	51,805	-	-	-	-	-
16-17	6,460	2,635	1,842	793	30.1	40.8
18-19	6,460	3,530	2,711	819	23.2	54.6
20-24	14,258	11,847	10,089	1,758	14.8	83.1
25-34	20,224	18,548	16,456	2,092	11.3	91.7
35-44	13,384	12,498	11,409	1,089	8.7	93.4
45-64	18,696	15,305	14,080	1,225	8.0	81.9
65+	5,898	1,227	986	241	19.6	20.8
Nonwhite Female	159,788	57,244	51,455	5,789	10.1	52.7
0-15	51,104	-	-	-	-	-
16-17	6,486	2,835	2,414	421	14.9	43.7
18-19	6,486	3,553	3,109	444	12.5	54.8
20-24	15,536	8,708	7,600	1,108	12.7	56.1
25-34	27,640	15,768	14,334	1,434	9.1	57.0
35-44	19,078	11,334	10,079	1,255	11.1	59.4
45-64	23,594	13,788	12,764	1,024	7.4	58.4
65+	9,864	1,258	1,155	103	8.2	12.8

Table 39

MASSACHUSETTS

ADDITIONAL PLANNING DATA PROJECTIONS

FISCAL YEAR 1980

	Employed Part-Time for Economic Reasons
TOTAL	106,387
White Male	41,509
White Female	54,846
Nonwhite Male	3,051
Nonwhite Female	3,859

	Economically Disadvantaged 18 Years and Over
TOTAL	487,146
White	421,515
Black	58,393
Other	7,238
Spanish	10,521

Table 40

MASSACHUSETTS

ADDITIONAL UNEMPLOYMENT PROJECTIONS

FISCAL YEAR 1980

	Unemployment	Unemployment Rate	Long-Term Unemployment	Number of Different Individuals Unemployed During Year
TOTAL	166,759	5.9	38,628	845,411
White Male	83,508	5.5	24,977	423,457
White Female	69,445	5.8	10,017	352,083
Nonwhite Male	8,017	12.2	2,854	40,713
Nonwhite Female	5,789	10.1	780	29,398

Table 41

POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS
FISCAL YEAR 1980
CETA
Balance of State

	Population	Labor Force	Employ	Unemploy	Unemploy Rate	Labor Force Participation Rate
TOTAL	3,373,622	1,661,524	1,566,817	94,707	5.7	65.9
White Male	1,579,256	935,738	885,737	50,001	5.3	81.1
0-15	425,476	-	-	-	-	-
16-17	68,679	45,961	-	-	-	66.9
18-19	68,679	52,509	-	-	-	76.5
20-24	146,773	128,616	-	-	-	87.6
25-34	186,640	182,908	-	-	-	98.0
35-44	175,539	172,028	-	-	-	98.0
45-64	347,939	313,415	-	-	-	90.1
65+	159,530	40,301	-	-	-	25.3
White Female	1,734,400	699,949	657,353	42,596	6.1	52.7
0-15	406,823	-	-	-	-	-
16-17	68,047	53,181	-	-	-	78.2
18-19	68,047	46,387	-	-	-	68.2
20-24	155,891	115,390	-	-	-	74.0
25-34	209,455	119,149	-	-	-	56.9
35-44	188,902	114,695	-	-	-	60.7
45-64	386,750	222,560	-	-	-	58.3
65+	250,483	25,588	-	-	-	10.2

Table 41

Cont'd Page 2

POPULATION AND LABOR FORCE COMPOSITION PROJECTIONS

FISCAL YEAR 1980
CETA
Balance of State

	Population	Labor Force	Employ	Unemploy	Unemploy Rate	Labor Force Participation Rate
Nonwhite Male	28,204	14,294	13,003	1,291	9.0	79.0
0-15	10,109	-	-	-	-	-
16-17	1,005	408	-	-	-	40.6
18-19	1,005	550	-	-	-	54.7
20-24	3,051	2,867	-	-	-	94.0
25-34	4,252	3,825	-	-	-	90.0
35-44	2,755	2,518	-	-	-	91.4
45-64	4,536	3,762	-	-	-	82.9
65+	1,490	363	-	-	-	24.3
Nonwhite Female	31,762	11,543	10,724	819	7.1	52.9
0-15	9,933	-	-	-	-	-
16-17	1,263	654	-	-	-	51.8
18-19	1,263	589	-	-	-	46.7
20-24	3,524	2,069	-	-	-	58.7
25-34	4,826	2,605	-	-	-	54.0
35-44	3,461	2,330	-	-	-	67.3
45-64	5,020	2,937	-	-	-	58.5
65+	2,473	359	-	-	-	14.5

Table 42

CETA

Balance of State

ADDITIONAL PLANNING DATA PROJECTIONS

FISCAL YEAR 1980

	Employed Part-Time for Economic Reasons
TOTAL	59,389
White Male	25,686
White Female	32,210
Nonwhite Male	689
Nonwhite Female	804

	Economically Disadvantaged 18 Years and Over
TOTAL	152,903
White	148,783
Black	2,859
Other	1,261
Spanish	3,302

Table 43

CETA

Balance of State

ADDITIONAL UNEMPLOYMENT PROJECTIONS

FISCAL YEAR 1980

	Unemployment	Unemployment Rate	Long-Term Unemployment	Number of Different Individuals Unemployed During Year
TOTAL	94,707	5.7	21,847	480,181
White Male	50,001	5.3	14,585	253,577
White Female	42,596	6.1	6,860	215,922
Nonwhite Male	1,291	9.0	371	6,533
Nonwhite Female	819	7.1	31	4,149

X. Training Opportunities for Massachusetts Labor Force

Each year, a large amount of tax dollars is spent on employment and training programs in Massachusetts. These programs are designed to train and improve the employability and productivity of the state's labor force. This section has been designed to overview the programs and services implemented in the Commonwealth to aid in the recruiting and training of individuals needing employability services and to improve the Massachusetts' labor force in a growing economy.

a. Work Incentive Program (WIN)

The Work Incentive Program (WIN) was orginally created by the 1967 amendments to the Social Security Act but was significantly changed by the 1971 amendment to the Act. WIN is jointly administered by the U. S. Department of Labor and the U. S. Department of Health, Education and Welfare through state employment agencies all over the country.

The 1971 amendments mandated the requirements that all persons applying for or receiving Aid to Families with Dependent Children (AFDC) must register with the WIN program for employment or training as a condition of eligibility for AFDC. The WIN program is a major effort to help those people receiving AFDC to become productive workers. The program provides social, medical, and childcare services and offers counseling, employability planning, work and training assignments, job placement and other assistance. The major emphasis of the program is putting individuals into immediate job placement rather than on counseling or extensive institutional training; thus, the AFDC recipients receive more emphasis on seeking employment rather than just receiving their AFDC welfare payment. The program is represented by 36 teams throughout Massachusetts and the following table shows the service components of the program.

An interesting aspect of the WIN program is the number of individuals in working registrants status. A working registrant is a sole parent who is employed more than 30 hours a week and who receives an AFDC supplement to wages earned. They will be deregistered from the WIN Program when their wages (after pay raises and promotions) reach a level which makes them ineligible to receive AFDC payments. Over 13 percent of WIN registrants are in working registrant status, an incremental approach to economic self-sufficiency. An additional five percent are in subsidized employment components. When the WIN registrants are working more than 30 hours a week, are in unsubidized employment, and are no longer receiving AFDC payments, they are deregistered from the program.

b. Comprehensive Employment and Training Act (CETA)

The Comprehensive Employment and Training Act of 1973 was developed in Massachusetts to establish a new community employment service system to aid persons in job placement as well as providing them with training and other supportive services. There are nine Prime Sponsors, eight of which represent consortia of municipalities based on the following cities: Boston, Cambridge, Fall River, Worcester, Springfield, Lowell, New Bedford, and Brockton, plus a sponsor - the balance of state.

The CETA Act of 1973 was implemented in Massachusetts with the purpose of identifying and allotting funds to target groups which are experiencing job-related problems. Some of these target groups are the long-term unemployed, economically disadvantaged, ex-offenders, older workers, persons with a limited knowledge of the English language, and Vietnam-era veterans.

CETA Eligibility Information

Title IIB

Services available under this Title includes: Orientation, Assessment (including Testing), Classroom Occupational Training, On-the-job Training, Work Experience, Individual Referral to short term public and private vocational training courses and job development. Basic Education, English as a Second Language and GED course are also available, in combination with vocational training, for employability improvement. All of these services are designed to improve the employability of participants within relatively short periods of time. At this time, there are no provisions for remedial education or vocational training courses which would require a great length of time.

Eligibility

Applicants must be:

1. Economically disadvantaged and unemployed or underemployed and a member of a significant segment.
2. Willing and able to participate in ES/CETA services/programs.
3. Lacking a marketable skill.

Limits participation:

1. No one can be in any CETA program longer than 2-2½ years in a five-year period;
2. No one can be in PSE longer than 78 weeks in a five-year period. There also is a waiver for on-board enrollees at the Secretary's discretion if a prime sponsor is having extreme hardship in placing PSE enrollees in unsubsidized jobs, or if the area has 7% or more unemployment.

   PSE wages may not exceed $10,000 per year, adjusted upward by the ratio that local wage rates bear to national average, but not to exceed 20% of the maximum (no more than $12,000), with some exceptions. Further, average wages in each prime sponsor area may not exceed $7,200, adjusted by the ratio that the local wage bears to the national average.

Title IID

This Title provides temporary public service jobs in State, City, Town, County agencies and departments. These jobs are now limited to a one-year duration. Job development services are provided to place participants in subsidized employment.

Eligibility

Participants in training programs and services (except upgrading and retraining) must have been economically disadvantaged and either unemployed, underemployed, or in school. Participants in PSE must have been economically disadvantaged and unemployed 15 or more weeks or on welfare. PSE must be entry level and combined with training and supportive services, if available. Supplementation of wages under this title is specifically prohibited.

Title III

Special Federal Responsibilities:

Programs for persons who have a particular disadvantage in the labor market, including Native Americans, migrants and other seasonal farmworkers, the handicapped, women, displaced homemakers, public assistance recipients, and other special target groups.

Authorized welfare demonstration projects, projects for the middle-aged and older workers, and a program for better coordination between prime sponsors and state employment security agencies.

Title IV

Youth Programs:

The Job Corps, Summer Youth Programs, and programs enacted in the Youth Employment and Demonstration Projects Act of 1977 (except the Young Adult Conservation Corps which is still Title VIII), namely, Youth Incentive Entitlement Pilot Projects, Youth Community Conservation and Improvement Projects, and Youth Employment and Training Programs. The Job Corps and Summer Youth Program are authorized for 4 years, and the 3 new youth programs for 2.

Title VI

Countercyclical Public Service Employment Program.

Temporary public service employment opportunities during periods of high unemployment, in sufficient number to employ 20 percent of the unemployed in excess of 4 percent unemployment, and 25 percent of the excess when national unemployment is 7 percent or higher. Participants must be unemployed at least 10 of the last 12 weeks or on welfare, and from a family whose income does not exceed the BLS lower living standard budget.

1. The Youth Employment and Training Program

The Youth Employment and Training Program (YETP) under the CETA Act, involves such services as classroom and on-the-job training, testing, placement, and work experience programs for youth ages 16 to 21, who meet certain low income criteria. The YETP pays firms to train young people in specific job-related skills. Below is listed a statewide tabulation of enrolees into the YETP as of September 30, 1978.

Enrolled this year	2624	
Total Terminations	1314	
Total Enrolled as of September 30, 1978	1310	
Number enrolled in services		
1. Career employment experience		690
2. Transition services		14
3. On-the-job training		39
4. Classroom Training		32
5. Work experience		756

2. Youth Incentive Entitlement Pilot Projects

The purpose of the Youth Incentive Entitlement Pilot Projects under the CETA act is to test the impact on high school return, retention, and completion rates of a job guarantee for 16 to 19 year old disadvantaged youth who are in school or willing to return. The program provides wage subsidies for companies who offer new part-time jobs or part-time jobs and training for these youth after school and during summer vacations. Participation of Massachusetts firms in this program encourages young people to complete their education and at the same time eases their transition into the work force.

3. Youth Community Conservation and Improvement Project

The Youth Community Conservation and Improvement Project is a CETA program which seeks to employ 16 to 19 year olds in work projects which will benefit the community. Business, public and private agencies, schools, and other community based organizations work together to design and operate projects that provide youth with employment, work experience, skill training and opportunities for community service.

Title VII

Private Sector Opportunities for the Economically Disadvantaged:

Authorized a Private Sector Initiative Program (PSIP) to demonstrate the effectiveness of ways of increasing the involvement of the business community, including minority and small businesses, in employment and training activities supported by CETA, and increase private sector jobs for the economically disadvantaged.

Provides funds for the establishment of private industry councils (a majority of whose members must be from the business community) which shall participate with prime sponsors in developing opportunities for economically disadvantaged persons in the private sector.

Title VIII

Young Adult Conservation Corps:

Provides employment and experience in various occupational skills to out-of-school young people from all social and economic backgrounds through work on conservation and other projects on federal and non-federal public lands and waters. Participants may be hired for a maximum of 12 months. Operated under agreement by Department of Labor, Agriculture, and interior. Authorized for 4 years, through FY 1982.

c. Apprenticeship Program

Apprentice training is a system under which a trainee acquires vocational skills "on-the-job" by working with journeyman craftsmen for a designated period of time. The training periods usually range from one to six years; most trade occupations require three to four years. The trainees are paid while they are training on the job. The wage rates usually start at about half the journeyman's rate up to 95 percent of the full pay near the end of the apprenticeship.

Apprenticeship programs are conducted as a joint effort by employers and schools with related instruction given in vocational schools and junior colleges, sometimes utilizing home study courses. During the duration of the program, study records are kept and the training progress of the apprentices are frequently evaluated. All apprenticeship programs in the Commonwealth must be approved by and registered with the State Division of Apprentice Training.

Both men and women are eligible to apply, both must be at least 16 years of age. The applicants must be physically able to do the work of the trade. There are approximately 415 apprenticeable trades, many being specialized jobs within certain occupations. The following table gives the percent and number of the sex composition in the apprenticeship program for January 1, 1976 through June 30, 1976 in 50 specific occupations.

d. Job Corps

How It Works:

A national system of 60 residential centers in 31 States and Puerto Rico provides basic education, vocational training, counseling, health care, and similar renewal services to help disadvantaged young men and women, 16 through 21, prepare for jobs and for responsible citizenship.

Enrollees in Job Corps residential centers receive room and board, clothing for work and dress, books and other learning supplies, and cash allowance, part of which is paid on leaving the program after satisfactory participation. A few of the centers can also accomodate young people who do not live on center but take training during the day. Enrollees may stay in Job Corps as long as 2 years, and at the end of their stay are given assistance in finding a job.

Training, often by skilled union workers, is given in such occupations as heavy equipment operation, auto repair, carpentry, painting, masonry, nursing and other health care jobs, clerical and office work, and electronic assembly. Basic education includes reading, mathematics, social studies, and preparation for the General Education Development (GED) high school equivalency examination.

Table 44
WIN Team Data
Massachusetts

	October 1, 1976 to March 31, 1977	October 1, 1977 to March 31, 1978
Registrants	84,750*	90,285*
New Registrants	21,458	24,720
Appraisals	15,425	12,369
Institutional Training	1,213	887
Work Experience	854	727
Suspense	1,932	7,424
On-The-Job-Training	976	1,056
Entered Unsubsidized Employment Expected to Last 30 Days or More	4,150	5,302

* Includes carry-over from prior fiscal years.

Note: A change in the definition of "Institutional Training" has resulted in a lesser number reported in that component.

Youth under age 20 are seven percent of the individuals who are registered with the WIN Program. It is mandatory for those AFDC youth age 16 and older who are out of school and unemployed to participate in the WIN Program. In addition to employment-coupled barriers such as lack of work experience, AFDC youth frequently have the increased burden of being the source of economic support for the AFDC family.

Table 45

Comprehensive Employment and Training Act (CETA) Program: Title I Year Ending September 30, 1978

	Participants							
	Number				Percent			
	Total	Male	Female	Youth 18 and Under	Total	Male	Female	Youth 18 and Under
STATE TOTAL	28,395	15,121	13,274	8,616	100.0	100.0	100.0	100.0
Prime Sponsors:								
Boston	4,312	2,393	1,919	846	15.2	15.8	14.5	9.8
Worcester	--	--	--	--	--	--	--	--
New Bedford	1,008	567	441	298	3.5	3.7	3.3	3.4
Springfield	2,418	1,344	1,074	496	8.5	8.9	8.1	5.7
Lowell	2,292	1,317	975	837	8.1	8.7	7.3	9.7
Cambridge	3,957	2,020	1,937	525	14.0	13.4	14.6	6.1
Brockton	1,045	559	486	429	3.7	3.7	3.7	5.0
Fall River	774	478	296	317	2.7	3.2	2.2	3.8
Balance of State	12,589	6,443	6,146	4,868	44.3	42.6	46.3	56.5

Source: Region I, United States Department of Labor

Table 46

Comprehensive Employment and Training Act (CETA) Program: Title I Year Ending September 30, 1978

	Entered Employment							
	Number				Percent			
	Total	Male	Female	Youth 18 and Under	Total	Male	Female	Youth 18 and Under
STATE TOTAL	8,209	4,907	3,302	1,225	100.0	100.0	100.0	100.0
Prime Sponsors								
Boston	1,860	1,188	672	131	22.7	24.2	20.4	10.7
Worcester	--	--	--	--	--	--	--	--
New Bedford	268	163	105	52	3.2	3.3	3.2	4.2
Springfield	902	547	355	128	11.0	11.2	10.8	10.5
Lowell	855	524	331	248	10.4	10.7	10.0	10.3
Cambridge	1,964	1,079	885	227	23.9	22.0	26.8	18.5
Brockton	310	183	127	59	3.8	3.7	3.8	4.8
Fall River	166	102	64	52	2.0	2.1	1.9	4.2
Balance of State	1,884	1,121	763	328	23.0	22.8	23.1	26.8

Source: Region I, United States Department of Labor

Table 47

Comprehensive Employment and Training Act
(CETA) Program: Title II
Year Ending September 30, 1978

	Participants							
	Number				Percent			
	Total	Male	Female	Youth 18 and Under	Total	Male	Female	Youth 18 and Under
STATE TOTAL	9,836	6,202	3,634	522	100.0	100.0	100.0	100.0
Prime Sponsors:								
Boston	1,644	1,168	476	167	16.7	18.8	13.1	32.0
Worcester	475	327	148	4	4.8	5.3	4.1	0.8
New Bedford	403	259	144	23	4.1	4.2	4.0	4.4
Springfield	799	425	374	57	8.1	6.9	10.3	10.9
Lowell	466	294	172	23	4.7	4.7	4.7	4.4
Cambridge	634	412	222	45	6.5	6.6	6.1	8.6
Brockton	330	171	159	8	3.4	2.8	4.4	1.6
Fall River	205	132	73	7	2.1	2.1	2.0	1.3
Balance of State	4,880	3,014	1,866	188	49.6	48.6	51.3	36.0

Source: Region I, United States Department of Labor

Table 48

Comprehensive Employment and Training Act
(CETA) Program: Title II
Year Ending September 30, 1978

	Entered Employment							
	Number				Percent			
	Total	Male	Female	Youth 18 and Under	Total	Male	Female	Youth 18 and Under
STATE TOTAL	1,351	808	543	61	100.0	100.0	100.0	100.0
Prime Sponsors:								
Boston	117	64	53	1	8.7	7.9	9.8	1.6
Worcester	110	79	31	0	8.1	9.8	5.7	--
New Bedford	61	34	27	3	4.5	4.2	5.0	4.9
Springfield	168	91	77	11	12.4	11.2	14.2	18.1
Lowell	67	45	22	4	5.0	5.6	4.0	6.6
Cambridge	59	30	29	3	4.4	3.7	5.3	4.9
Brockton	80	36	44	2	5.9	4.5	8.1	3.3
Fall River	32	20	12	1	2.4	2.5	2.2	1.6
Balance of State	657	409	248	36	48.6	50.6	45.7	59.0

Source: Region I, United States Department of Labor

Table 49

Comprehensive Employment and Training Act
(CETA) Program: Title VI
Year Ending September 30, 1978

	Participants							
	Number				Percent			
	Total	Male	Female	Youth 18 and Under	Total	Male	Female	Youth 18 and Under
STATE TOTAL	41,879	29,380	12,499	1,279	100.0	100.0	100.0	100.0
Prime Sponsors:								
Boston	4,083	3,022	1,061	139	9.7	10.3	8.5	10.9
Worcester	2,471	1,645	826	52	5.9	5.6	6.6	4.1
New Bedford	2,309	1,682	627	100	5.5	5.7	5.0	7.8
Springfield	4,199	2,967	1,232	158	10.0	10.1	9.9	12.3
Lowell	1,991	1,493	498	41	4.8	5.1	4.0	3.2
Cambridge	1,967	1,309	658	60	4.7	4.5	5.3	4.7
Brockton	1,911	1,189	722	30	4.6	4.0	5.8	2.3
Fall River	1,073	772	301	34	2.6	2.6	2.4	2.7
Balance of State	21,875	15,301	6,574	665	52.2	52.1	52.5	52.0

Source: Region I, United States Department of Labor

Table 50

Comprehensive Employment and Training Act (CETA) Program: Title VI Year Ending September 30, 1978

	Entered Employment							
	Number				Percent			
	Total	Male	Female	Youth 18 and Under	Total	Male	Female	Youth 18 and Under
STATE TOTAL	5,287	3,575	1,712	112	100.0	100.0	100.0	100.0
Prime Sponsors:								
Boston	214	150	64	3	4.0	4.2	3.7	2.7
Worcester	424	293	131	0	8.0	8.2	7.7	0.0
New Bedford	324	257	67	12	6.1	7.2	3.9	10.7
Springfield	520	336	184	15	9.8	9.4	10.8	13.4
Lowell	205	158	47	4	3.9	4.4	2.7	3.6
Cambridge	221	146	75	8	4.2	4.1	4.4	7.1
Brockton	457	311	146	6	8.7	8.7	8.5	5.4
Fall River	186	138	48	7	3.5	3.8	2.8	6.2
Balance of State	2,736	1,786	950	57	51.8	50.0	55.5	50.9

Source: Region I, United States Department of Labor

Table 51

Apprenticeship Programs
Occupational Groups
January 1, 1976 through June 30, 1976

		Male		Female	
Occupational Groups	Total*	Number	Percent	Number	Percent
Air Conditioning & Refrigeration Mechanics	146	146	100.0	0	0.0
Aircraft Mechanics	1	1	100.0	0	0.0
Auto and Related Mechinics	193	193	100.0	0	0.0
Auto and Related Body Repairers	90	90	100.0	0	0.0
Boilermakers	36	36	100.0	0	0.0
Bookbinders, Bindery Workers	38	38	100.0	0	0.0
Bricklayers, Stone and Tile Setters	197	196	99.5	1	0.5
Butchers, Meat Cutters	17	17	100.0	0	0.0
Cabinetmakers, Wood Machinists	59	59	100.0	0	0.0
Car Repairers-Auto, Truck Mechanics	32	32	100.0	0	0.0
Carpenters	597	594	99.5	3	0.5
Cement Masons	11	11	100.0	0	0.0
Compositors	61	55	90.2	6	9.8
Cooks, Bakers	28	27	96.4	1	3.6
Drafters	56	49	87.5	7	12.5
Electrical Workers, n.e.c.	9	9	100.0	0	0.0
Electricians	689	688	99.9	1	0.1
Electronic Technicians	22	21	95.5	1	4.5
Floor Coverers	1	1	100.0	0	0.0
Glaziers	16	16	100.0	0	0.0
Industrial Technicians, n.e.c.	0	0	100.0	0	0.0
Insulation Workers	37	37	100.0	0	0.0
Lathers	9	9	100.0	0	0.0
Line Erectors, Light and Power	20	20	100.0	0	0.0
Lithographers, Photoengravers	19	19	100.0	0	0.0
Machine Set-up and Operators	33	33	100.0	0	0.0
Machinists	515	493	95.7	22	4.3
Maintenance Mechanics	4	3	75.0	1	25.0
Mechanics & Repairers, n.e.c.	35	35	100.0	0	0.0
Medical & Dental Technicians	28	27	96.4	1	3.6
Millwrights	48	47	97.9	1	2.1
Molders, Coremakers	11	11	100.0	0	0.0
Office Machine Services	64	61	95.3	3	4.7
Operating Engineers	74	74	100.0	0	0.0
Optical Workers	24	22	91.7	2	8.3
Painters	81	81	100.0	0	0.0
Pattermakers	8	8	100.0	0	0.0
Pipefitters	165	165	100.0	0	0.0
Pipefitters and Steamfitters	2	2	100.0	0	0.0

Table 51 (con't)
Apprenticeship Programs
Occupational Groups
January 1, 1976 through June 30, 1976
(continued)

Occupational Groups	Total*	Male		Female	
		Number	Percent	Number	Percent
Plasters	2	2	100.0	0	0.0
Press Operators	114	114	100.0	0	0.0
Printing and Publishing Works, n.e.c. Plateworkers	1	1	100.0	0	0.0
Radio and TV Repairers	24	24	100.0	0	0.0
Roofers	36	36	100.0	0	0.0
Sheetmetal Workers	207	206	99.5	1	0.5
Sprinkler Fitters	10	10	100.0	0	0.0
Stationary Engineers	4	4	100.0	0	0.0
Structural Steel Workers	163	163	100.0	0	0.0
Toolmakers, Diemakers	159	157	98.7	2	1.3
Miscellaneous Trades, n.e.c.	143	143	100.0	0	0.0
All Groups State Summary 1975	5,327	5,276	99.0	51	1.0
All Groups State Summary 1976	4,803	4,750	98.9	53	1.1
All Groups State Summary 1977	4,080	4,008	98.2	72	1.8

* Excludes INA

APPENDIX

Table 52

Distribution of High School Graduates
5 Year Summary in Percentages

CLASS	2 YEAR PUBLIC COLLEGE	4 YEAR PUBLIC COLLEGE	2 YEAR PRIVATE COLLEGE	4 YEAR PRIVATE COLLEGE	NURSES TRAINING	OTHER POST - SECONDARY	MILITARY	WORK	OTHER	INFORMATION NOT AVAILABLE
1978	10.20	17.16	4.02	19.32	0.77	4.46	3.77	32.22	4.96	3.12
1977	10.97	16.46	4.18	19.32	0.99	4.54	4.17	31.83	4.84	2.70
1976	10.66	15.58	4.47	18.39	1.11	4.61	4.04	30.83	6.60	3.71
1975	11.11	16.38	4.19	17.49	1.30	4.32	4.03	30.85	6.08	4.25
1974	10.37	16.56	4.05	18.06	1.55	4.98	3.09	32.28	9.06	*

SOURCE: Massachusetts Department of Education
Total Graduates 1978: 78,348
Total Seniors 1979: 82,051

*In 1974, the "other" category included both graduates whose plans did not fit into other classifications and graduates about whom the schools had no information

79/04/12.

APRIL CONTROL FORECAST Table 53

SUMMARY REPORT
MASSACHUSETTS ECONOMIC POLICY ANALYSIS MODEL
(Seasonally Adjusted Annual Rates)

	Fiscal 1975	Fiscal 1976	Fiscal 1977	Fiscal 1978	Fiscal 1979	Fiscal 1980	Fiscal 1981
Employment--Nonag. W. & S.	2310	2291	2345	2448	2545	2569	2618
% Change	NA	-.8	2.4	4.4	3.9	1.0	1.9
Manufacturing	606	583	605	634	660	659	666
% Change	NA	-3.9	3.9	4.7	4.0	-.1	1.1
Non-Manufacturing	1703	1708	1739	1814	1885	1910	1951
% Change	NA	.3	1.8	4.3	3.9	1.3	2.1
Unemployment Rate	9.4	10.8	8.6	7.0	5.9	6.4	6.3
Employment Rate Index*	100.5	98.7	102.4	105.2	108.2	108.5	109.3
% Change	NA	-1.8	3.8	2.8	2.9	.2	.8
Relative to U.S. Index*	99.9	98.7	99.1	100.2	101.1	101.2	101.3
Rate of Wage Change	NA	6.8	6.3	5.9	8.7	9.4	9.6
Wage Index Rel. to U.S.*	98.6	98.1	97.0	95.4	95.6	95.6	96.0
Avg. Weekly Hours in Mfg.	39.4	39.7	39.8	40.1	40.5	40.2	40.2
Rate of Price Inflation	NA	8.8	5.9	4.9	7.0	8.8	7.8
Relative to U.S. CPI*	99.1	100.6	100.7	99.0	97.0	97.1	97.4
Personal Income (mil$)	34067	36912	40122	44199	50017	55310	61873
% Change	NA	8.4	8.7	10.2	13.2	10.6	11.9
Disposable Income (mil$)	29108	31507	34032	37400	42145	46598	51914
% Change	NA	8.2	8.0	9.9	12.7	10.6	11.4
Real Per Cap. D.I. Index*	97.4	97.1	99.3	104.1	109.7	111.0	114.0
Relative to U.S.*	100.2	98.0	98.2	99.6	103.3	103.0	102.8
Rel. Business Cost Index*	99.1	99.4	98.0	97.3	98.4	98.3	98.5
Manufacturing*	98.9	98.5	97.5	97.1	97.1	97.0	97.2
Non-Manufacturing*	99.2	99.8	98.2	97.4	98.9	98.9	99.1

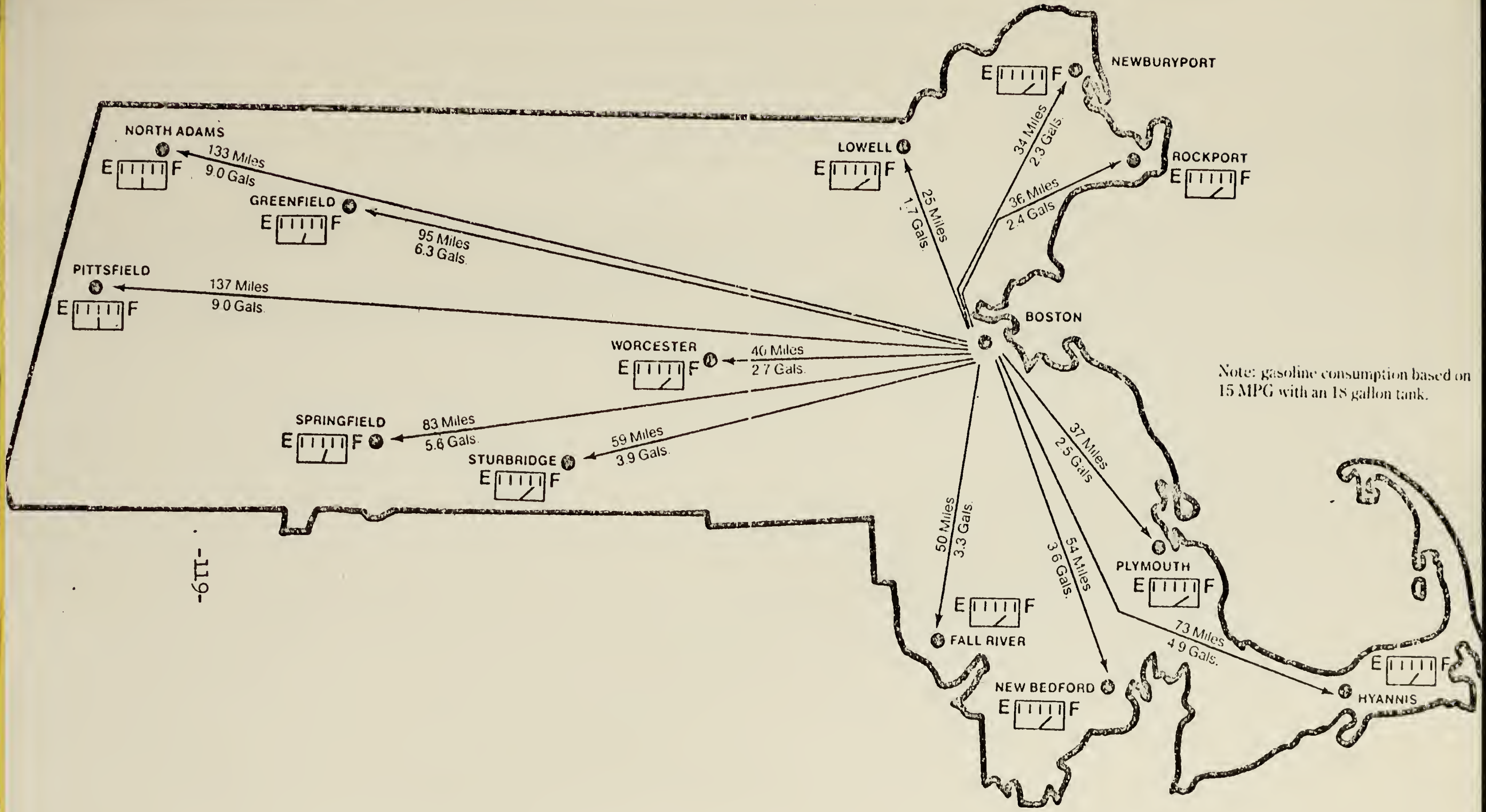
---

*Indexes equal 100 in calendar 1973.

Table 54

Massachusetts and U. S. Nonagricultural Employment

	Percent of Total Employment			
	Massachusetts		United States	
	1977	1978	1977	1978
Manufacturing	25.8	25.9	23.8	23.7
Durable	14.6	14.8	14.0	14.2
Nondurable	11.2	11.1	9.8	9.5
Lumber & Wood	0.9	0.9	3.3	3.7
Furniture & Fixtures	1.4	1.3	2.6	2.4
Stone, Clay & Glass	2.0	2.0	3.3	3.4
Primary Metals	2.7	2.7	6.2	5.9
Fabricated Metals	8.4	8.4	7.4	8.1
Nonelectrical Machinery	13.2	13.3	11.2	11.5
Electrical Machinery	14.7	15.0	9.9	9.7
Transportation Equipment	5.4	5.7	9.2	9.6
Instruments	8.1	8.1	2.7	3.2
Food	4.7	4.7	8.8	8.3
Textiles	4.5	4.4	5.0	4.5
Apparel	6.9	6.7	6.6	6.5
Paper	4.7	4.7	3.6	3.5
Printing & Publishing	6.8	6.6	5.6	5.8
Chemicals	2.8	2.7	5.4	5.4
Rubber	4.8	4.8	3.5	3.7
Leather	3.7	3.5	1.3	1.2
Other Manufacturing	4.3	4.5	4.4	3.6
Contract Construction	2.9	3.0	4.7	4.9
Transp., Comm., & Pub. Util.	4.8	4.6	5.6	5.7
Wholesale and Retail	22.3	22.3	22.3	22.6
Finance, Insurance & R. Est.	5.8	5.7	5.5	5.5
Service & Mining	22.2	22.7	19.7	19.6
Government	16.2	15.8	18.5	18.0
Federal	2.4	2.3	3.3	3.2
State & Local	13.8	13.5	15.2	14.8



Note: gasoline consumption based on
15 MPG with an 18 gallon tank.

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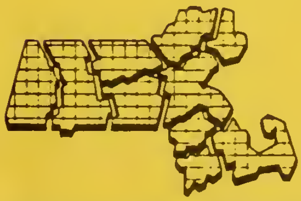
ANNUAL PLANNING INFORMATION REPORT
FISCAL YEAR 1981
MASSACHUSETTS



LABOR AREA RESEARCH PUBLICATION

Massachusetts Division of Employment Security

job market research

THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY
Charles F. Hurley Building
Government Center, Boston, MA. 02114

ANNUAL PLANNING INFORMATION REPORT
FISCAL YEAR 1981

COMMONWEALTH OF MASSACHUSETTS

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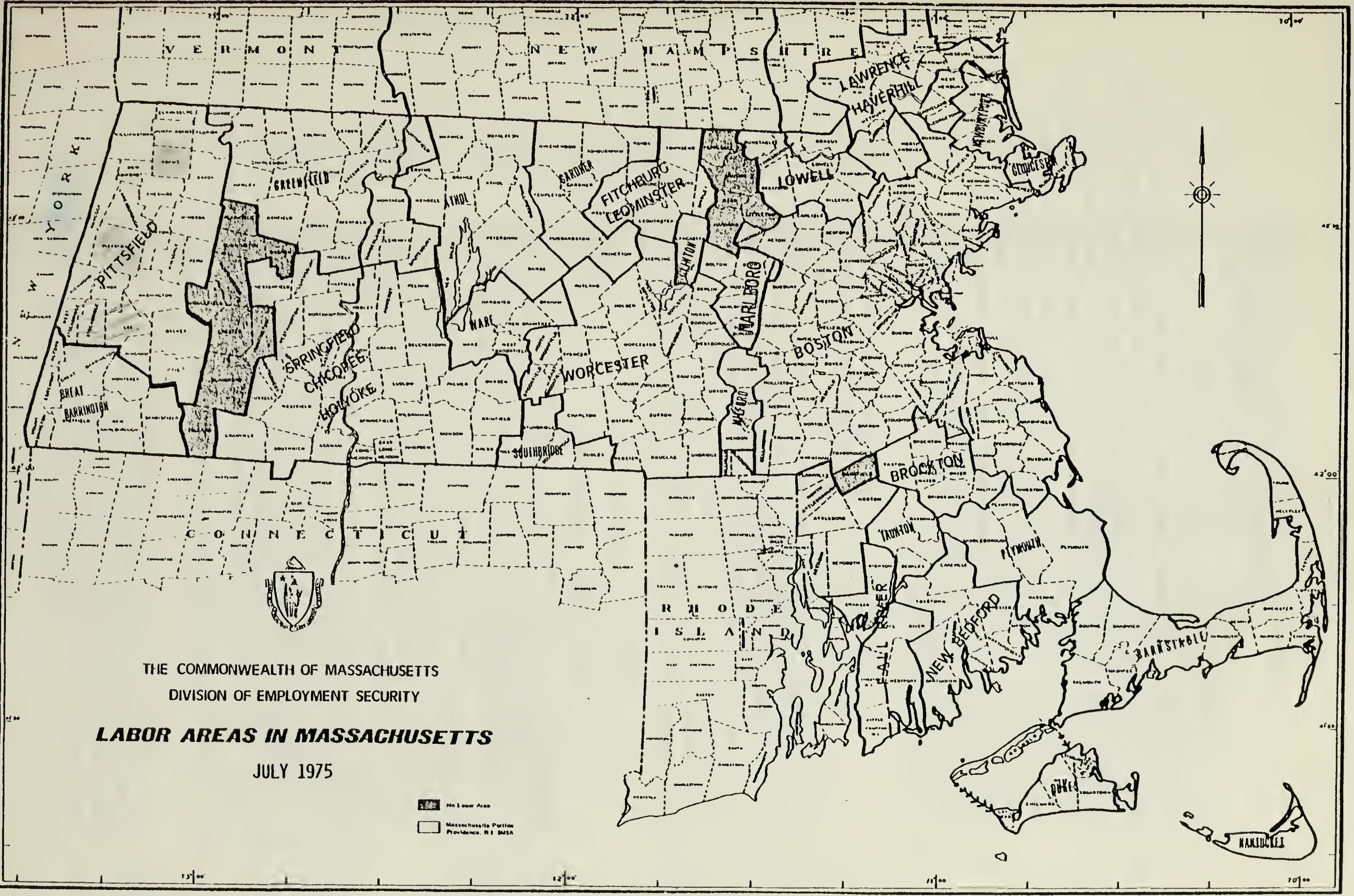

THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

LABOR AREAS IN MASSACHUSETTS

JULY 1975

I. ASSUMPTIONS AND PROJECTIONS FOR THE ECONOMY
COMMONWEALTH OF MASSACHUSETTS
FEDERAL FISCAL YEAR 1981 (FFY '81)

The Job Market Research staff of the Division of Employment Security has the responsibility for analyzing and reporting changes in the State's employment and unemployment. Nevertheless, even with the most current data and with computer models of the national and state economies, projecting economic conditions is extremely difficult in these times of rapid changes. (At the national level, for example, projections of the FFY '81 average unemployment rate have been increased by almost two percentage points in a recent two-month period.) The economic assumptions for Massachusetts were based on data available at the beginning of June 1980.

1. Employment

Employment by industry groups has been projected for the coming fiscal year. Detailed projections are analyzed in a later section of this report. Total employment in Massachusetts is expected to range around 2,705,000 for FFY '81. This is an expected decline of 5,000 from FFY '80. Wage and salary employment projections by industry group for FFY '81 range around the levels shown below:

Industry	Employment Projected FFY 1981 in 000's
TOTAL NONAGRICULTURAL EMPLOYMENT	2,655.4
Manufacturing - Total	669.4
Durable goods	406.1
Nondurable goods	263.3
Construction	78.0
Transportation, Communications & Public Utilities	119.1
Wholesale and Retail Trade	589.2
Finance, Insurance and Real Estate	151.8
Services 1/	626.1
Government - Total	421.6
Federal	60.8
State	98.1
Local	262.8

1/ Includes part of Agriculture and Mining

2. Unemployment Rate

We expect Massachusetts to average approximately one-half to one percentage point below the national average rate. As of this writing, the Data Resources Incorporated (DRI) national forecast is for an 8.5 percent average unemployment rate during FFY '81. This would give Massachusetts an average unemployment rate of about 8 percent over the same time period.

3. Labor Turnover

The labor turnover in Massachusetts is expected to follow the 1971 trend during which new hires and quits fell 30 percent to levels below 2.0 per 100 employees. Total accessions are expected to be fewer than total separations by a ratio of 2 to 3.

4. Wages and Inflation

Total wages are expected to increase by approximately 11 percent. Purchasing power is not expected to rise by as much as wages because inflation will continue to reduce the value of the dollar. During FFY '80 inflation has risen to 13.5 percent, but is expected to be less in FFY'81 -- perhaps down to 10 percent. It is doubtful that consumers will continue purchasing at the FFY '80 rate, which is already considerably lower than FFY '79 in real terms.

5. Credit

The cost of financing current purchases is expected to remain high, but well below the FFY '80 peak which saw a prime rate of 20 percent. The mortgage rates are projected to be around 11.0-11.5 percent in FFY '81, and consumer credit in a range of 11-12 percent. All interest rates are highly sensitive to changes in U. S. Treasury or Federal Reserve Bank policies.

6. Defense Contracts

Defense contract spending, vital to the health of the Massachusetts economy, is expected to remain stable at its current levels. Massachusetts is among the top 10 states in the receipt of defense contracts with a value greater than $10,000. The nearly $3 billion awarded to the Commonwealth's firms represents over 5 percent of the total awards.

7. Energy

Because the Massachusetts industrial mix is relatively nonenergy intensive, we do not expect the upward trend in energy prices to affect Massachusetts as much as the rest of the country. During 1979, industries coped with rising energy costs through conservation, conversion, and cogeneration.

II. Description Of The State and Labor Areas

A. Massachusetts Labor Areas

The United States Department of Labor Employment and Training Administration has apportioned the Commonwealth of Massachusetts into the following:

Four Standard Metropolitan Statistical Areas(SMSA)

Boston
Brockton
Fitchburg-Leominster
Lawrence-Haverhill

Seven Major Labor Market Areas(LMA)

Fall River
Lowell
New Bedford
Pittsfield
Springfield-Chicopee-Holyoke
Worcester
Massachusetts Portion of the
Providence-Pawtucket, Rhode Island
Labor Area

Sixteen Small Labor Market Areas(LMA)

Athol
Barnstable County
Clinton
Dukes
Gardner
Gloucester
Great Barrington
Greenfield
Marlborough
Milford
Nantucket County
Newburyport
Plymouth
Southbridge
Taunton
Ware

and fifteen towns with no labor area attachment which comprise the Balance of State.

A "labor area" consists of a central city or cities and the surrounding territory within commuting distance. It is an economically integrated geographical unit within which workers may readily change jobs without changing their place of residence. Labor areas usually include one or more entire counties. except in New England where towns are considered the major geographical units.

Major labor areas usually have at least one central city with a population of 50,000 or more. In most instances boundaries of major labor areas coincide with those of Standard Metropolitan Statistical Areas as determined by the Office of Management and Budget in consultation with a Federal interagency committee.

Geographical boundaries of all classified areas are listed in an Employment and Training Administration publication entitled "Directory of Important Labor Areas". Revision in labor area boundaries are listed monthly in the "Area Trends in Employment and Unemployment" bulletin.

B. Massachusetts CETA Areas by Prime Sponsors

Boston
Brockton
Cambridge
Fall River
Lowell
New Bedford
Pittsfield
Salem
Springfield
Worcester
Balance of Massachusetts

C. Description of Massachusetts

Massachusetts is located in the Northeastern section of the Continental United States bordered by the states of Vermont and New Hampshire on the north, the Atlantic Ocean on the east, the states of Rhode Island and Connecticut on the south and the state of New York on the west. The state ranks forty-fifth among the states in size with land area of 7,838.68 square miles, according to the Department of Commerce and Development. The climate of the state is favorable to industrial enterprise.

	Boston	Pittsfield	Worcester
Normal Temp. in Jan.	29.9°F	21.8°F	25.9°F
Normal Temp. in July	73.7°F	67.8°F	70.6°F
Normal Annual Precip.	42.8 inch.	44.4 inch.	45.5 inch.

Long renowned for its historical heritage, Massachusetts can claim impressive historical accomplishments aiding intellectual, cultural and social contributions to the founding and growth of the nation.

Massachusetts has always been a great trading center, Massport an independent public authority, which was created in the late 1950's has significantly improved the Port of Boston and Logan Airport. Massachusetts' location gives her the "beginning of the line" for foreign shipments. Logan Airport is one hour closer to Europe than any other major airport. The Port of Boston is closer than any other seaport on the Eastern Seaboard to Europe, West Africa, and Northeast South America.

The state is divided into seven topographic regions. From east to west: (1) Cape Cod - flat, nearly at sea level with many lake or pond filled depressions; (2) Boston Basin - gentle contour with tear-drop shaped hills; (3) Seaboard Lowland - flat to gently rolling with 1,000 to 2,000 foot elevations; (4) New England Upland - rolling to hilly plateau with 1,000 to 2,000 foot elevations; (5) Lower Connecticut Valley - flat to gently rolling with less than 100 to 400 foot elevations; (6) Berkshire Hills - rough rolling upland with a general elevation of 2,000 feet and (7) Green Mountains and Foot Hills - rugged and mountainous with 1,500 to 3,000 foot elevations.

D. Population Characteristics

The total population of Massachusetts grew by 1.5 percent between 1970 and 1978 to 5,774,000 people, as reported by the Bureau of Census, U. S. Department of Commerce. Massachusetts has had major migrational changes between counties since 1970. A look at Table 1 indicated tremendous growth in the southeast region of the state, a factor largely attributed to a change in environmental preference from urban to rural communities. As a result, Essex and Suffolk counties are showing declines because of the lack of desire for inner city environments.

The total resident population (Table 2) has increased 1.4 percent between 1970 and 1979 to 5,769,000 people as reported by the Bureau of Census. This table also indicates, that Massachusetts ranks 6th in growth among the ten largest states from 1970 to 1979.

Population projections for Fiscal Year 1981 in Table 3 indicates that there will be a 2.0 percent projected increase in the total population from 1970. The white 0-15 age group shows a downward trend, while their nonwhite counterparts are expected to increase. The 20-34 year olds, which indicates the prime working age population, shows large increases in all categories.

Table 1. Estimates of Population
Massachusetts,Counties
(Metropolitan and Nonmetropolitan Areas)
July 1, 1978, 1977 and 1976; April 1, 1970

Area	July 1, 1978 (Provisional)	July 1, 1977	July 1, 1976	April 1, 1970 (Census)	Change From 1970 to 1978	
					Number	Percent
Massachusetts	5,774,000	5,777,000	5,791,000	5,689,170	84,830	1.5
Counties						
Barnstable	142,000	137,300	132,800	96,656	45,344	4.7
Berkshire	143,700	144,000	146,000	149,402	- 5,702	- 3.8
Bristol	472,100	469,100	469,300	444,301	27,799	6.3
Dukes	8,300	8,100	7,800	6,117	2,183	35.7
Essex	626,200	625,200	627,800	637,887	-11,687	- 1.8
Franklin	62,100	61,700	61,300	59,210	2,890	4.9
Hampden	454,500	457,600	459,600	459,050	- 4,550	- 1.0
Hampshire	132,700	131,700	133,000	123,981	8,719	7.0
Middlesex	1,381,300	1,385,800	1,392,000	1,398,397	17,097	- 1.2
Nantucket	5,300	5,600	5,500	3,774	1,526	40.4
Norfolk	619,600	618,900	618,200	604,854	14,746	2.4
Plymouth	395,700	388,400	380,700	333,314	62,386	1.9
Suffolk............	685,000	701,300	714,400	735,190	-50,190	- 6.8
Worcester	645,100	642,800	642,900	637,037	8,063	1.3
Metropolitan	5,556,300	5,564,700	5,583,900	5,523,413	32,887	0.6
Nonmetropolitan	217,700	212,600	207,500	165,757	51,943	31.3

(State estimates are shown to the nearest thousand, county estimates to the nearest hundred.)

Source: U. S. Department of Commerce, Bureau of Census, Series P-25, No. 811 & 797.

Note: Subtotals may not add to totals due to rounding.

Table 2 Estimates of the Resident Population

(in 000's)

	Total Resident Population				
				Change 1970 to 1979	
Areas	July 1, 1979	July 1, 1978	April 1, 1970 Census	Number	Percent
United States	220,099.0	218,228.0	203,302.0	16,797.0	8.3
Massachusetts	5,769.0	5,771.0	5,689.0	80.0	1.4
California	22,696.0	22,314.0	19,971.0	2,725.0	13.6
Florida............	8,860.0	8,661.0	6,791.0	2,069.0	30.5
Illinois...........	11,230.0	11,238.0	11,110.0	119.0	1.1
Michigan...........	9,208.0	9,181.0	8,882.0	326.0	3.7
New Jersey.........	7,332.0	7,315.0	7,171.0	161.0	2.2
New York...........	17,649.0	17,746.0	18,241.0	- 592.0	- 3.2
Ohio...............	10,731.0	10,732.0	10,657.0	74.0	0.7
Pennsylvania.......	11,731.0	11,763.0	11,801.0	- 70.0	- 0.6
Texas..............	13,385.0	13,050.0	11,199.0	2,186.0	19.5
10 Largest States..	118,591.0	117,771.0	111,512.0	7,079.0	6.4
Connecticut.........	3,115.0	3,116.0	3,032.0	83.0	2.7
Maine...............	1,097.0	1,092.0	994.0	103.0	10.4
New Hampshire	887.0	869.0	738.0	149.0	20.2
Rhode Island........	929.0	932.0	950.0	- 20.0	- 2.1
Vermont.............	493.0	487.0	445.0	49.0	10.9
TOTAL - New England.........	12,291.0	12,267.0	11,847.0	444.0	3.7
Northeast...........	49,004.0	49,092.0	49,061.0	- 56.0	- 0.1
North Central......	58,408.0	58,257.0	56,590.0	1,818.0	3.2
South..............	71,543.0	70,644.0	62,813.0	8,730.0	13.9
West...............	41,143.0	40,235.0	34,838.0	6,305.0	18.1

Source: U. S. Department of Commerce, Bureau of Census; Series P.-25, No. 868

Note: Estimates are in thousands.

Totals may not add due to rounding.

Table 3 Population Composition Projected Change
Massachusetts
1970 - 1981

	Population April 1, 1970	Projected Population July 1, 1981	Change 1970 to 1981	
			Number	Percent
TOTAL	5,689,170	5,802,252	113,082	2.0
White Male	2,621,003	2,585,438	- 35,565	- 1.4
0-15	818,388	641,047	-177,341	-21.7
16-17	101,554	114,458	12,904	12.7
18-19	94,567	114,458	19,891	21.0
20-24	203,460	262,981	59,521	29.3
25-34	309,780	321,761	11,981	3.9
35-44	299,288	285,893	-13,395	- 4.5
45-64	553,720	579,703	25,983	4.7
65+	240,256	265,137	24,881	10.4
White Female	2,863,354	2,926,008	62,654	2.2
0-15	786,308	612,662	-173,646	-22.1
16-17	97,336	111,779	14,443	14.8
18-19	103,082	111,779	8,697	8.4
20-24	232,024	271,656	39,632	17.1
25-34	319,591	396,567	76,976	24.1
35-44	311,648	318,896	7,248	2.3
45-64	629,217	650,855	21,638	3.4
65+	384,148	451,814	67,666	17.6
Nonwhite Male	97,063	132.532	35,469	36.5
0-15	37,808	47,379	9,571	25.3
16-17	3,619	6,675	3,056	84.4
18-19	3,931	6,675	2,744	69.8
20-24	8,402	14,743	6,341	75.5
25-34	13,904	20,462	6,558	45.2
35-44	10,783	12,857	2,074	19.2
45-64	13,394	17,815	4,421	33.0
65+	5,223	5,926	703	13.5
Nonwhite Female	107,750	158,274	50,524	46.9
0-15	37,658	46,861	9,203	24.4
16-17	3,631	6,708	3,077	84.7
18-19	4,337	6,708	2,371	54.7
20-24	10,603	16,128	5,525	52.1
25-34	16,579	28,567	11,988	72.3
35-44	12,394	19,460	7,066	57.0
45-64	15,441	23,463	8,022	51.9
65+	7,107	10,379	3,272	46.0

Projected series produced by the University of California at Berkeley.

E. Civilian Labor Force

The projected civilian labor force is based on the Lawrence/Berkley Laboratory Series. The growth in the labor force which is expected for Fiscal Year 1981 is largely evidenced by the increase of youth and women. This phenomenon can be related to the increase of service-oriented jobs in the Commonwealth, which are youth intensive in terms of staffing patterns. Another factor is the necessity of a secondary earner in many families which enables the family to achieve a desired standard of living. Therefore, this demographic shift shows evidence of women and youth challenging the traditional male-oriented work force.

F. Nonagricultural Wage and Salary Employment

Table 6 provides a review and projections of the Wage and Salary Employment in Nonagricultural Industries from 1972 to 1981. The data are from the findings of the Bureau of Labor Statistics (BLS) 790 establishments-based employment survey and the Massachusetts Economic Policy Analysis (MEPA) Model Forecast by George Treyz and Roy Williams. A complete detailed overview and a forecasting of trends in wage and salary employment by major industrial group appears in Chapter IV Employment Developments and Outlooks by Industry.

Table 4 Labor Force Composition Projected Change

Massachusetts

1970 - 1981

Race and Age	April 1, 1970	July 1, 1981	Change 1970 to 1981	
			Number	Percent
TOTAL	2,464,000	2,966,572	502,572	20.4
White Males	1,409,103	1,507,336	98,233	7.0
16-17	46,998	79,537	32,539	69.2
18-19	55,793	79,245	23,452	42.0
20-24	157,449	209,100	51,651	32.8
25-34	292,170	298,980	6,810	2.3
35-44	286,969	268,106	-18,863	- 6.6
45-64	500,579	472,282	-28,297	- 5.6
65+	69,145	100,086	30,941	44.7
White Females	932,331	1,330,243	397,912	42.7
16-17	40,475	103,889	63,414	156.7
18-19	54,234	80,116	25,882	47.7
20-24	142,197	215,305	73,108	51.4
25-34	137,716	277,010	139,294	101.1
35-44	158,079	221,570	63,491	40.2
45-64	353,830	386,797	32,967	9.3
65+	45,800	45,556	- 244	- 0.5
Nonwhite Males	42,978	62,353	19,375	45.1
16-17	1,097	3,302	2,205	201.0
18-19	1,877	3,550	1,673	89.1
20-24	6,040	10,026	3,986	66.0
25-34	11,907	17,691	5,784	48.6
35-44	9,415	11,375	1,960	20.8
45-64	11,330	14,829	3,499	30.9
65+	1,312	1,580	268	20.4
Nonwhite Females	33,258	66,640	33,382	100.4
16-17	978	4,778	3,800	388.5
18-19	1,989	4,560	2,571	129.3
20-24	5,490	10,632	5,142	93.7
25-34	7,999	17,769	9,770	122.1
35-44	6,752	13,049	6,297	93.3
45-64	8,886	14,384	5,498	61.9
65+	1,164	1,468	304	26.1

Table 5 Labor Force, Employment, Unemployment
Massachusetts and the Labor Areas
1979 Annual Averages

Areas	Labor Force	Employment	Unemployment	Unemployment Rate
Massachusetts	2,891,000	2,731,000	160,000	5.5
Major Labor Areas				
Boston SMSA	1,406,166	1,332,302	73,864	5.3
Brockton SMSA	80,663	75,678	4,985	6.2
Fall River LMA*	70,082	64,959	5,123	7.3
Lawrence-Haverhill SMSA*	115,152	106,969	8,183	7.1
Lowell LMA	118,179	111,639	6,540	5.5
New Bedford LMA	80,721	74,465	6,256	7.8
Springfield LMA	276,325	263,051	13,274	4.8
Worcester LMA	196,652	187,408	9,244	4.7
Other Labor Areas				
Athol	10,990	10,426	564	5.1
Barnstable	66,199	61,356	4,843	7.3
Clinton	9,298	8,744	554	6.0
Dukes	5,424	5,031	393	7.2
Fitchburg-Leominster	49,122	46,730	2,392	4.9
Gardner	21,664	20,551	1,113	5.1
Gloucester	24,306	22,287	2,019	8.3
Great Barrington	8,796	8,389	407	4.6
Greenfield	27,410	26,061	1,349	4.9
Marlboro	57,886	55,720	2,166	3.7
Milford	19,946	18,935	1,011	5.1
Nantucket	3,083	2,915	168	5.4
Newburyport	19,753	18,445	1,308	6.6
Pittsfield	71,493	67,297	4,196	5.9
Plymouth	33,371	30,283	3,088	9.3
Southbridge	16,486	15,740	746	4.5
Taunton	26,277	24,448	1,829	7.0
Ware	6,414	6,007	407	6.3
Massachusetts Share Of Rhode Island	48,253	45,359	2,894	6.0
Balance of State	20,645	19,380	1,265	6.1

* Massachusetts Portion

III. Economic Development and Outlook Through Fiscal Year 1981

The state and nation have been gearing themselves for the third recession within ten years, a recession which many feel will be the second worst since 1945. This section will give a brief overview of the national economy, and discuss its effect within Massachusetts.

A. Employment

The April to June quarter of 1980 had the highest quarterly decrease in Gross National Product since World War II. Reflecting this decline, the latest forecast by Data Resources Inc. (DRI) projects that nationally there will be a loss of two million jobs by the depth of the recession. The employment declines will continue through the third quarter of calendar 1980. The recession is expected to bottom out in the fourth quarter. Employment will begin to rebound at the very end of the year. Sustained but slow growth should be seen starting in the first quarter of calendar 1981.

The Massachusetts employment cycle is expected to follow the national pattern. Employment will bottom out in the October-December quarter and begin to grow again starting in the January-March quarter of 1981. As present we expect FFY'81 employment to average 5,000 less than FFY'80. However, if the national economy does not pick up after the turn of the year, or if the recession is even slightly deeper than we expect, the annual average employment could be 15,000-20,000 less than last year.

Comparing the employment level in Massachusetts at the start of the recession to its trough, that is from the second quarter of calendar 1980 to the fourth, the drop in total employment may be as much as 40,000. A decline of that magnitude, while large, is still proportionately less than for the U. S. as a whole.

B. Unemployment

As a consequence of the drop in employment, the unemployment rate inevitably will go up. Section VI, called "Trends in Unemployment", will discuss this topic more fully. In this section, we will limit ourselves to predicting the unemployment rate through FFY'81.

Nationally, it is expected that the rate will go up steadily for the rest of the year, peaking during the January-March quarter of 1981 at about 9 percent. Then the rate should slowly but steadily decrease through the Spring and Summer of 1981. The national annual average unemployment rate for FFY 1981 will be in the range of 8.5-8.7 percent, in contrast to a projected rate of 7.7 percent for FFY 1980.

In Massachusetts we can expect to follow the national trend with two exceptions. We expect that our unemployment may peak as early as the October-December 1980 quarter rather than during 1981, and we believe that our unemployment rate will remain significantly below the national rate throughout the recession. We do not anticipate our unemployment rate to exceed 8.5 percent at any time within the next 18 months. Our annual average rate should be well below 7.0 percent for FFY 1980 and no higher than 8.0 percent for FFY 1981. At the depth of the recession, the number of unemployed are not expected to exceed 250,000 at worst. As a point of comparison, in June 1975 there were 334,000 unemployed in the Commonwealth.

C. Wages and Inflation

Total wages paid to Massachusetts residents are expected to increase by about 11 percent during FFY 1981. The rise in take home pay will be less. Unfortunately, it is likely that an 11 percent increase will not keep pace with the rise in consumer prices, and therefore there probably will be a decline in real purchasing power. Two of the main causes of this decline in buying power will be the increase in energy costs and increased wage-dependent taxes.

Although conservation efforts have decreased our dependence on imported oil, OPEC countries intend to increase their prices. OPEC policy is both a political and an economic statement. Thus we will be paying at least as much, and probably more money, for less oil. Also, prices for domestically produced fuels will increase as their pricing schedules are deregulated by the Federal government. Although the cost of gasoline has declined recently, this reduction is expected to be only temporary.

Higher payroll deductions for Social Security are scheduled to begin in January 1981. This increase, coupled with the fact that inflation has pushed incomes into higher tax brackets, would mean that the Federal Government would be taking a much higher portion of national income next year. There is talk of lowering income taxes for individuals and corporations, and of raising depreciation allowances for business. As of now, however, such tax cuts are still "just talk", and the administration is opposed to them. Even should there be tax cuts next year, they may not be of a magnitude to significantly increase personal or corporate buying power in real terms.

Real Spendable Earnings and Employment

The Bureau of Labor Statistics reports that gross average weekly earnings of factory production workers in the Boston area were $279.97 in January 1980, an 8.3 percent increase from January 1979. Despite this increase in gross pay, the purchasing power of the worker's wages fell by 5.2 percent over the year. In constant 1967 dollars (1967=$100) the average weekly spendable earnings decreased from $111.73 to $105.97. While take-home pay was up 7.1 percent over the year, the Boston CPI for Urban Wage Earners and Clerical Workers rose 14.0 percent from January 1979 to January 1980, and reduced by 5.2 percent the amount of goods and services that could be purchased with these paychecks.

In the year ending January 1980, energy costs climbed 52.4 percent, while transportation costs rose 20.5 percent, followed by housing 12.7 percent,medical care 11.0 percent, entertainment 10.3 percent, other goods and services 9.8 percent, food and beverages 9.6 percent, and apparel and upkeep 8.8 percent. Retail sales remained healthy throughout 1979.

There is sufficient evidence that consumers coped with rising energy prices through conversion and conservation. The cost of fuels and other utilities was a significant factor in the increased cost of housing. Shelter itself increased only by 8.3 percent. Fuel oil, coal and bottled gas climbed 66.9 percent and piped gas and electricity increased 25.0 percent. In New England, petroleum consumption has decreased 8.8 percent between 1973 and 1977. During 1979, conservation has been implemented by residential heating oil users. In the residential sector, 20,878 natural gas conversions were experienced by Boston Gas, Commonwealth Gas, and Fitchburg Gas and Electric Light Company. Nationwide, 225,000 homeowners switched to gas in 1979. Permits for wood burning stoves and solar hot water heating installation were at their highest level. Continued conservation and conversion to oil heat alternatives could impact the number of individuals employed by heat dealers. The New England Fuel Institute has launched an advertising campaign to emphasize the efficiency of oil burners and the long-range implications of the Natural Gas Policy Act Of 1979.

Over the year ending January 1980, the cost of private transportation increased 21.1 percent and public transportation costs rose 13.0 percent. Total gasoline consumption has declined 8.8 percent during 1979 in New England. Preliminary figures indicate that utilization of public transportation, private carriers, car-pools, and van-pools has increased. The Boston and Maine Railroad's business has increased by 11 percent in the past year. The Plymouth and Brockton Street Railway Company added 10 coaches to its commuter bus fleet. About 480 car-pools purchased Massachusetts Turnpike Authority car-pool passes within the first two months after their introduction. Caravan added 30 van-pools since July 1979. Employment at gasoline service stations could be adversely effected by transportation costs.

During most of 1979, consumer spending in Massachusetts remained healthy. Individuals did not react traditionally to news of an imminent downturn in the national economy. The continued purchases on credit has been interpreted as a reflection of an attitude that the best way to keep pace with inflation is to spend today. Since the advent of inflation-fighting credit restrictions in March, 1980, the use of credit card charges at retail stores has decreased. Media attention to the effects of unemployment in states such as Michigan may make consumers more cautious in spending. Survival industries such as (SIC 541) grocery stores; (SIC 565) family clothing stores; (SIC 632) accident and health insurance and medical service plans; and (SIC 806) hospitals should continue to experience increases in employment within the next year.

D. Credit Crunch and Employment

Consumers

The credit card restrictions may change the buying habits of the lower and middle economic status spenders. Gasoline stations and some hotels are not longer accepting revolving credit cards. Department stores and banks have been permitted to raise the interest rate above 18 percent and lower the maximum credit allowance on revolving credit cards. The high interest rates experienced in February, 1980 has further reduced sales of automobiles, homes, and consumer durable goods such as silverware. Thus, employment levels in lumber and wood products, housing, construction, and the sector of the tourist industry dependent on day trippers may be adversely effected by the temporary credit crunch.

Small Businesses and Employment

As in the past, small business (less than 250 employees), have been hit hardest by inflation-fighting credit restrictions implemented in March, 1980. The Small Business Administration announced that small business bankruptcies increased 48 percent in the two months following the implementation of the credit restrictions. The instant reading in March 1980 conducted by the First National Bank of Boston in cooperation with the Smaller Business Association of New England recorded extensive erosion of small business performance in such key categories as shipments, new orders, and profits. The 80 New England small businesses surveyed were mainly manufacturing companies. In Massachusetts, 56.3 percent of wage and salary employment in 1979 was in establishments with less than 250 employees. In the manufacturing sector, 43.2 percent of employment was with firms which employed less than 250 employees. Large firms usually have greater financial reserves and favored credit status with commercial banks. Industries in which more than sixty percent of employment is with establishments employing 250 or more individuals include nonelectrical machinery (SIC 35), electric and electronic equipment (SIC 36), transportation equipment (SIC 37), instruments and related products (SIC 38), air transportation (SIC 45), communications (SIC 48), insurance carriers (SIC 63), health services (SIC 80), and educational services (SIC 82). The risk of mass layoffs due to financial foreclosures or bankruptcies for these industries is reduced.

E. Employment and Defense Contracts

Preliminary data for 1979 indicates that Massachusetts is among the top ten states in receipt of defense contracts over $10,000. The nearly three billion dollars awarded to Massachusetts firms represented 5.2 percent of the United States awards. This share of the dollar value of prime contracts is twice the state population share of the national population (2.6 percent). The 1979 contract amount as percentage of the U. S. total is now the same share (5.2 percent) as in 1960. The dollar value of the contracts has increased one hundred forty-nine percent since 1970.

The top forty production contracts are in the following industries: electronic systems transmitting equipment (SIC 3662), semiconductors (SIC 3674), aircraft engines (SIC 3728), and guided missiles (SIC 3761). Of the 351 contractors who received contracts greater than $100,000, the awards were concentrated in electronic systems transmission equipment (SIC 3662), electronic components (SIC 3679), aircraft engines (SIC 3728), guided missiles (SIC 3671), optical instruments (SIC 3832), computer programming and software services (SIC 7372), research and development labs (SIC 7391), and engineering services (SIC 8911). Defense related employment in these industries is expected to increase moderately within the next year.

Table 6 Massachusetts Military Prime Contract Awards
By
Rank and Percent of U. S. Awards
FY 1978

Procurement Programs	State Rank	Percent of U. S.
Aircraft Engines & Related Spares..........	2nd	20.4
Missile & Space Systems....................	2nd	12.7
Sep. Procured Containers & Handling Equip..	3rd	5.3
Textiles, Clothing & Equip.................	5th	5.3
Production Equipment.......................	5th	6.0
Photographic Equipment & Supplies..........	2nd	31.1
Services.......	4th	6.6
RDT & E....................................	2nd.	10.0
Nonprofit Institutions................	1st	45.5
Educational Institutions..............	2nd	25.8

Source: "Military Prime Contracts by Region and State Fiscal Years 1976, 1977, 1978", Office of the Secretary Department of Defense

F. Energy and Employment

The New England Regional Commission sees the rising energy prices, particularly oil product prices, having a significant impact on the region in a number of ways:

1. Rapidly rising energy prices contribute to inflation.
2. Increased prices lead directly to increased costs of doing business and the cost of living, particularly in relation to the region's fuel mix and the already above average prices for energy experienced in New England.
3. Rising energy prices indirectly effect a person's consumption expenditure patterns by requiring that a higher percentage of income be used to pay for energy.

Of particular concern is the effect the cost of energy has on the regional economy. Since over 90 percent of the primary energy consumed in New England emanates from outside the region, the majority of energy expenditures flows directly out of the region draining the economy of consumption expenditures and savings which could be used to finance investments in the economy.

Potential impacts of energy costs on employment could be:

1. Increased expenditures on necessities mean people have less money to spend on consumer nondurables produced in the region, tourism or services.
2. A lower level of savings in the economy could affect the availability of funds for capital investment projects. Industries such as primary metals and fabricated metals would be impacted by a decline in orders for capital intensive machinery.
3. Older,less efficient, and energy-intensive industries such as paper and allied products, chemical and allied products, and primary metal industries may be particularly vulnerable to higher energy prices. These types of firms, particularly when located in rural areas and employing a significant percentage of a town's labor force may be most vulnerable, and result in the creation of pockets of unemployment in the midst of a strong, high technology oriented economy.

4. Employment levels in industries dependent on oil and gasoline consumption or on petrochemicals would be effected. The following industries would experience energy-related decreases in employment.

    a. Public Works and Housing Construction - (SIC 15 general building contractors, SIC 16 heavy construction contractors, SIC 17 special trade contractors, SIC 24 lumber and wood products, SIC 25 furniture, SIC 655 subdivision and developers, and SIC 656 operative builders.)

    b. Private Use Transportation Equipment and Service: (SIC 371 motor vehicles and equipment, SIC 3732 recreational boat building, SIC 421 and 423 trucking services, SIC 45 air transportation, SIC 554 gasoline service stations.)

    c. Petrochemicals By-Products: (SIC 282 plastics and synthetic resins sector, SIC 301 tires and inner tubes, SIC 307 miscellaneous plastic products, SIC 3861 photographic supplies.)

5. In the long term, employment in energy production and agriculture could increase.

    a. There is a proposal to build a synthetic fuels' plant in Fall River.

    b. Higher costs for fuel imported into the region (i.e. oil, gas, and coal) make "low head" hydroelectric power,and energy from wood and local waste materials more cost attractive.

    c. Rising production and transportation costs, which are added on to the prices for food goods,may make more agricultural activity plausible as the cost differential decreases between locally grown food and food imported into the region.

G. Exports and Employment

Massachusetts ranks among the top states when employment related to manufactured exports as a percent of state employment is considered. In 1976, Massachusetts was ranked number 11 as an exporter. The efforts of Massport, SBANE*, and the Foreign Business Trade Council in the past three years have greatly increased the value and volume of exports. In the July 1980 issue of "Industry" magazine, Governor King stated that on a per capita dollar basis, Massachusetts exports more than any other state in the Union.

In 1976, 8.2 percent of total manufacturing employment in Massachusetts was dependent on exports manufactured goods. Industries predominant in export-related jobs are nonelectrical machinery, electric and electronic equipment, instruments and related products, chemicals and allied products, and transportation equipment. The mini-computers, special industry machinery, and measuring and controlling instruments industries sell many of their products abroad. If the recession is limited to the United States, export-related employment will be cushioned from the fallout of a national recession.

Massachusetts is also prominent in the "export" of services. Bay State consulting, insurance, banking, computer programming and software services, engineering services, research and development labs, educational services, and transportation services firms have many foreign clients. In addition, the state's major private universities and hospitals, particularly those in the Boston area, generate "export earnings".

* Smaller Business Association of New England

IV. State Employment Review and Projections by Industry

In this section we will attempt to give a brief review of Massachusetts' employment conditions in the 1970's, particularly since the 1975 recession. In addition, we will present projections of employment for Federal Fiscal Year 1981. The data for the review and the projections are presented in five tables:

Table 7	shows the Current Employment Series data on employment for calendar years 1970 through 1979.
Table 8	presents the percent distribution of the state's nonagricultural wage and salary employment by industry from 1970 through 1979. The percent distribution should be reviewed in context with Table 7 . Non-agricultural wage and salary employment increased by over 330,000 during the decade. An industry's annual average employment could have increased during the decade while at the same time its percent share of total employment could have declined. To retain the same percent share of total state employment, an industry's employment would have to have been augmented by 14.9 percent since 1970, or 14.4 percent since 1975.
Table 9	lists the state's industrial employment levels from 1975 to 1979, and the relative share (by percent) of each industry's subsector.
Table 10	presents projections for the state's employment levels through Federal Fiscal Year 1982, based on the June 1980 forecast of the Massachusetts Economic Policy (MEPA) model done by George I. Treyz and Roy E. Williams at the University of Massachusetts, Amherst Campus. The MEPA model for the Commonwealth is "driven" by the national forecasting model of Data Resources Inc., Lexington, Massachusetts. The Labor Area Research Department, Massachusetts Division of Employment Security, has adjusted some of the employment totals.
Table 11	illustrates, by industry, the Bay State's percentage share of national manufacturing employment for FFY 1979 through FFY 1982. This data is derived from the July MEPA model forecast. The national manufacturing projections on which these percentages were based are from the DRI national model. The Labor Area Research Department did not adjust any of the July MEPA model employment totals on which these percentages are based. We believe that the projected

Massachusetts levels for Office and Computing Machinery (SIC 357) and Electronic Components (SIC 367) are perhaps understated. Therefore, our percentages of national employment for these two industries would also be underestimated if no proportional increase occurs in the national projections.

A. Employment Review

The Massachusetts economy has had significant growth since the 1974 recession. Total nonagricultural employment, increasing continuously since 1975, shows a gain of 14.4 percent in the current 1979 employment series. A closer look at the data suggests a number of important occurrences. To begin, manufacturing employment for 1979 is at a peak level. Durables employment was up 24.9 percent since the post recession period of 1975 and up 5.1 percent from 1978. Nondurables employment has grown 5.0 percent in the post recessionary period, but was down 0.5 percent over the year. Nonmanufacturing employment, rising 13.8 percent since 1975, was 2.9 percent above the 1978 employment estimate.

The Massachusetts economy since 1975 has shown its greatest employment growth in manufacturing (especially durable goods manufacturing); wholesale and retail trade; services; finance, insurance and real estate; and government. The nature of the Commonwealth's economy has changed, it has developed a strong growth in the high technology and service-related industries.

Manufacturing is proportionately less important in Massachusetts than it was in 1970. This is due to the drop in nondurable goods employment. In 1970, one of every seven nonagricultural workers in the state worked in a nondurable goods manufacturing industry. However, by 1979 the proportion had decreased to one in ten. Durable goods employment has a slightly larger portion of total nonagricultural employment than a decade ago, with most of the gain since the 1974-1975 recession. Among the durable goods industries, nonelectrical machinery, instruments, fabricated metals and transportation equipment presently have a higher share of total employment then they had in 1970. In the case of fabricated metals and transportation equipment the increase is partially due to the inclusion of employment that in 1970 was assigned under the old SIC coding system to the ordnance industry. No nondurable industries had a higher percentage of total nonagricultural employment in 1979 than it had in 1970. Looking ahead to the eighties, we expect that manufacturing will continue to be 25-26 percent of the state's employment. This will be the result of durable goods increasing its relative share (particularly nonelectrical and electrical machinery, transportation equipment, and instruments) while nondurable goods manufacturing industries continue their relative decline. Among nonmanufacturing industries, the greatest increases were experienced in services (+3 percent), and government (+2 percent). Using round figures, about one-third of total nonagricultural employment in 1970 was in either services or government. By 1979, four of every ten workers were employed in these two sectors.

B. Employment Outlook

Last year we foresaw a recession starting in 1979, with renewed growth by the spring of 1980. Our forecast (along with most others) miscalculated the start of the recession. Instead of recovering from a recession during the summer of 1980, we are in the middle of one. Although we thought the recession would be milder here than elsewhere, we had actually understated the case because we had underestimated the strength and the comparative independence of the Massachusetts economy in relation to the national economy.

Two particularly strong subsectors of the Bay State's economy are high technology manufacturing and service business. However, the limited supply of skilled personnel necessary for expansion has begun to dampen the present growth of our high technology industries. Despite this problem, "high tech" businesses should fare will in FFY 1981, because of the great demand for the products which they produce. Services are also expected to weather the recession well, although there will be a slowdown in their rate of growth.

High interest rates and energy costs will inhibit the growth of industry nationwide. The general level of interest rates are patterned by the level of inflation and by Federal government policy, over which we have very little control locally. Regionally, we have limited control of energy costs. Nevertheless, it is expected that deregulation of oil and gas prices will impact most other areas of the nation more than it will effect us. In addition, most of our industries, including manufacturing, are not energy-intensive.

Presently, the national economy is in recession. Massachusetts has begun to experience ripple effects, but has escaped the significant reduction in nonagricultural employment that occurred during the two recessions of the 1970's. We do expect total nonagricultural employment to drop slightly in FFY 1981. The biggest declines are expected in nondurable goods employment (down 2.9 percent), construction (-3.9 percent) and local government (-1.4 percent).

Summarizing employment trends briefly:

Durable Manufacturing

Lumber (24): A significant drop in employment. This industry will be hurt by the general slowdown in construction, especially the dearth in new housing starts.

Furniture (25): A slight decrease due to the drop in sales of office furniture and new homes furniture.

Stone, Clay and Glass (32): A very slight increase, because of the relationship between the products this industry produces and their input demand to other Massachusetts industries.

Primary Metals (33): An overall industry decrease - but a strength will be maintained by ammunition foundries which receive federal contracts.

Fabricated Metals (34): Lower employment expected - declines in the demand for cutlery, hand tools and general hardware, and products linked to the automobile industry.

Nonelectrical Machinery (35): An increase expected because of the increased demand for office, computing, and accounting machines. Metal working machinery and special industry machinery employment will depend on capital investment in the U. S. and abroad, and the cost of money. Companies will have to assess the break-even point of increased productivity versus the increased cost of money. The international export market for this industry's products will remain a critical variable in its growth.

Electrical Machinery (36): An increase is projected but one not as large as those experienced since 1976. Electronic components will continue to be a particularly strong subsector. Sixteen percent of the electric machinery industry's employment is related to exports, which should provide strength during a national recession.

Transportation (37): A slight decrease. Defense Department contracts should stabilize most employment producing aircraft and parts and guided missiles. A vulnerable subsector is ship and boat building and repairing. The slowdown in shipbuilding is affecting shipyards throughout North America and Europe. Shipyards in Quebec have maintained employment levels by constructing platforms for deep sea oil drilling. If oil is found off the New England coast, perhaps this solution could be used to underpin local shipyards' employment.

Instruments (38): A modest decline in FFY'81 with renewed growth in 1982. The photographic equipment subsector has already experienced a five percent loss in employment, which is not unexpected for an industrial sector which is vulnerable to changes in consumer demand. Measuring and controlling instruments, optical instruments, and medical instruments are strong subsectors of this industry. About 17 percent of the industry's employment is related to the export market.

Nondurables Manufacturing

Food (20): Stable or slight increase in employment - fish processing could be effected by business in fast-food chains- NECCO Company contract up for renewal.

Textiles (22): Moderate decline in employment. The synthetic weaving mills may be a source of strength. Companies which manufacture automobile upholstery and home furnishings may be effected if the recession is deep and prolonged. Geneva Trade Agreement should maintain the status quo as far as imports are concerned. Employment in Fall River and the Lawrence-Haverhill area has shown suprising buoyancy. The Malden Mills ILGW contract expires in November 1980.

Apparel (23): Moderate decline in employment. Uniforms and military apparel employment will remain stable.

Paper (26): A modest decline in employment. The paper industry is both energy and capital intensive. It has been automating plants heavily, which means that replacement hiring has been declining and will continue to do so. This industry traditionally has been hard hit during recessions, particularly the paper and pulp subsector. The processed and finished paper subsector is expected to remain stable. The Bird and Son, Inc. contract with IBT union terminates in December, 1980.

Printing and Publishing (27): A moderate decline. The growing demand for the printed word is being offset by increased automation made possible by word processing and computerized graphics technology. This is decreasing the need for highly paid linotypers and printers. The Boston Daily Newspapers union contract terminates in December 1980.

Chemicals (28): A slight decline in employment. Medical chemistry employment should experience growth. Export of soaps, cleaners, and toilet goods accounts for about 15 percent of the industry's employment. Increased automation in the industry will lead to a decrease in employment in some firms due to attrition. The cost and availability of petrochemicals may effect the plastics and synthetic resins sector (SIC 282).

Rubber (30): A significant decline is typical in this recession prone industry. The collapse of demand for automobiles means less demand from the automobile industry. The cost and availability of plastics and synthetic resins made from petrochemicals will also hurt the industry - as the size of automobiles are reduced, they require smaller tires. This, combined with the automobile slump, and the diminished need for snow tires because of the introduction of radial tires, means tough sledding for the manufacturers. Uniroyal has announced that its Chicopee plant will close. Of the plant's 1,600 workers, one quarter will accept early retirement, while the rest will remain in the labor force.

Leather (31): A modest decline in employment is expected. The increase in the cost of leather will effect consumer spending until inflation is curtailed. The availability of raw hide is a critical factor in this industry. Speciality shoes, such as Topsiders, and quality leather shoes are beginning to compete successfully with European imports. The Stride-Rite contract with the RCIU union expires in December 1980.

Nonmanufacturing:

Construction: Significant decline in employment. The number of construction projects is expected to decline, but the value of construction should increase slightly. Building construction will predominantly include scheduled manufacturing buildings, apartment buildings, hotels, and office buildings. Nonbuilding major construction underway includes the MBTA Redline, Route 495 Extension, Route 195 Extension, and Route 190 Extension.

Transportation and Utilities: Slight decline in employment. Transportation:School bus employment expansion due to desegregation court orders and Chapter 766 will remain stable. Employment by airlines may decrease, as airlines, influenced by the high cost of jet fuel, will cancel unprofitable routes, or if overseas passenger flights become less frequent. Taxi jobs will decrease.

Telephone: Employment will decrease slightly. Improved technology such as fiber optics, electronic switching devices and automated pay phones (telephone credit cards) will reduce the need for telephone operators but will increase the need for EDP support personnel.

Utilities: Employment will decrease slightly. The cost of energy combined with automation will decrease the need for meter readers and installers and repairers with the possible exception of gas utilities which have a back-up of conversion requests.

Wholesale and Retail Trade: Employment will increase slightly or remain stable. Both fast food chains and department stores indicate there has been a reversal in the mix of full-time and part-time workers. Part-time workers now outnumber full-time workers. The impact of the credit crunch on employment in retail sales is difficult to assess. Pockets of strength will include grocery stores and drug stores.

Finance, Insurance, and Real Estate: Slight increase in employment. The gradual introduction of automatic tellers and electronic transfer systems (ETS) will impede the increase in employment in large banks. This automation will increase the need for EDP support personnel but decrease the need for tellers and unskilled clerical workers. The life insurance industry employment will remain stable.

Services: Services grew much faster throughout the seventies than did total employment. During the recession of 1975, this sector had only a small loss of employment. During this recession we expect services to continue to grow, but not at the rate of the past several years. The economic slowdown is only part of the reason for the slower growth in services. Many service workers work only part-time. Thus,it is possible for the service sector to show employment growth, when actually there has been no real growth in full-time equivalent positions. Because of the tightening of the labor market in the past few years and a projected contraction of the labor market growth rate in the next few years, we expect that there will be fewer individuals available or willing to work only part-time. Therefore, we do not anticipate that the projected growth in service employment will be as large as that experienced from 1977 to 1979. We expect business services (SIC 73), health services (SIC 80) and social services (SIC 83) to continue their growth, while personal services (SIC 72) and educational services (SIC 82) will stabilize or decline. The health services industry (SIC 80), which provides over 36 percent of service industry employment, will continue to be a strong foundation during the current economic downturn. The 1980 summer tourist season to-date has been excellent. This has led to employment increases in hotels and motels (SIC 70) and amusements (SIC 79). A new market has been created for the tourist industry. A large group of Europeans has been attracted by the relative weakness of the U. S. dollar and the increased number of Boston/Europe air routes. Fortunately, Boston being an international gateway, can provide the interpretive services needed. Efforts have been refocused on the traditional Northeast American market, which includes an estimated 25 percent of the entire United States population. Many of the "tourists" are Massachusetts, Connecticut, New York and Quebec residents who have decided to take their vacations closer to home. The addition of direct flights between Boston and Texas has created a new summer tourist market.

Government: Government employment is expected to drop in FFY 1981, the first decline in many years. Small anticipated increases in Federal and state employment will be more than offset by a 1.4 percent drop in local government. Federal employment could fall if administrations change and the opposition's proposed freeze in Federal hiring is implemented. Local government may have a greater decrease than we currently anticipate if their increases in revenue do not keep pace with inflation.

Table 7 Employment in Massachusetts
Calendar Years 1970-1979

(in 000's)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Annual Average Nonagricultural Wage & Salary Employment - Total	2261.7	2224.2	2259.8	2345.7	2362.6	2272.4	2314.4	2416.0	2526.5	2598.9
Manufacturing	648.3	600.2	602.5	629.5	632.2	577.8	593.6	621.0	652.4	670.3
Durables	334.3	305.2	306.1	333.4	348.3	318.9	325.8	352.3	379.2	398.4
Ordnance	20.2	16.8	16.1	17.3	19.6	*-	--	--	--	--
Lumber	4.6	4.5	4.7	4.9	4.6	4.4	4.9	5.2	5.4	5.3
Furniture	10.1	9.7	9.9	10.2	9.9	8.4	8.2	8.4	8.6	8.3
Stone, Clay, Glass	12.1	11.6	12.2	13.7	14.5	10.9	12.1	12.3	13.1	13.4
Primary Metals	19.8	17.1	17.1	19.4	20.4	15.5	16.1	16.9	17.1	17.5
Fabricated Metals	40.7	38.5	40.2	44.1	45.3	49.2	50.4	51.8	53.2	54.5
Nonelectrical Machinery	74.1	68.0	68.3	75.9	80.8	74.0	74.0	82.0	90.4	100.3
Electrical Machinery	95.2	84.6	83.7	90.7	94.5	82.8	83.8	91.0	98.3	104.1
Transportation Equip.	25.3	23.1	21.5	20.5	17.7	30.0	31.2	33.2	36.4	37.0
Instruments	32.2	31.3	32.4	36.7	41.0	43.7	45.1	51.5	56.7	58.0
Nondurables	314.0	295.0	296.4	296.1	283.9	258.9	267.8	268.7	273.2	271.9
Food	37.1	36.0	35.4	33.7	31.6	28.6	29.5	29.1	28.5	28.0
Textiles	31.2	28.8	29.5	29.6	28.1	25.2	27.7	27.9	28.2	27.2
Apparel	49.2	46.9	46.8	46.9	43.4	40.1	43.2	42.8	42.1	41.1
Paper	35.1	32.7	32.6	33.5	32.8	27.9	28.9	29.4	30.4	30.2
Printing	45.0	42.5	43.1	43.7	42.2	40.3	41.0	42.2	42.9	44.1
Chemicals	19.4	18.4	18.0	18.9	19.5	19.8	18.4	17.3	17.7	18.1
Rubber & Plastics	33.6	31.3	33.0	35.3	34.4	27.8	29.6	30.3	32.1	33.0
Leather & Leather Prod.	35.9	31.8	30.6	27.2	24.4	23.0	24.1	22.8	23.5	22.0
Other Nondurables	27.4	26.6	27.4	28.3	27.5	25.2	25.4	26.9	27.8	28.2

Table 7 Employment in Massachusetts
Calendar Years 1970-1979
(in 000's)
(continued)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Nonmanufacturing	1613.4	1624.0	1658.4	1716.4	1730.4	1694.8	1720.8	1795.0	1874.1	1928.6
Construction	100.2	102.5	107.2	107.9	96.8	79.8	71.7	66.7	72.8	76.6
Transp. Comm., and Public Utilities	117.3	117.0	121.4	123.4	123.1	113.7	112.8	114.9	117.3	120.1
Wholesale & Retail Trade	495.0	500.4	504.0	519.5	523.5	511.8	520.2	533.7	547.3	567.4
Finance, Insurance and Real Estate	129.8	130.2	131.6	136.6	138.7	135.1	135.3	143.2	146.7	148.2
Service, Mining, Miscellaneous	451.2	443.3	451.1	477.4	494.0	489.1	508.3	528.6	560.8	596.2
Government	319.9	330.6	343.1	351.6	354.3	365.3	372.5	407.9	429.2	420.1
Federal	65.0	62.3	64.4	61.9	58.2	58.0	57.8	56.5	57.4	58.0
State	254.9	268.3	278.7	289.7	296.1	307.1	314.7	86.8	92.2	93.8
Local	#	#	#	#	#	#	#	264.6	279.5	268.3

* SIC Code Conversion

Source: Current Employment Series of the Massachusetts Division of Employment Security in cooperation with the U. S. Department of Labor -- Bureau of Labor Statistics.

# From 1970-1976 Local government included in state total.

Table 8 Employment in Massachusetts
Calendar Years 1970-1979
Percent Distribution

Industry	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Nonagricultural Wage and Salary Employment Total....................	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Manufacturing............	28.66	26.98	26.66	26.84	26.76	25.43	25.65	25.70	25.82	25.79
Durable Goods...........	14.78	13.72	13.55	14.21	14.74	14.03	14.08	14.58	15.01	15.33
Ordnance..............	0.89	0.76	0.71	0.74	0.83	-*	-	-	-	-
Lumber................	0.20	0.20	0.21	0.21	0.19	0.19	0.21	0.22	0.21	0.20
Furniture.............	0.45	0.44	0.44	0.43	0.42	0.37	0.35	0.35	0.34	0.32
Stone, Clay, Glass....	0.53	0.52	0.54	0.58	0.61	0.48	0.52	0.51	0.52	0.52
Primary Metals........	0.88	0.77	0.76	0.83	0.86	0.68	0.70	0.70	0.68	0.67
Fabricated Metals.....	1.80	1.73	1.78	1.88	1.92	2.17	2.18	2.14	2.11	2.10
Nonelectrical Machinery	3.28	3.06	3.02	3.24	3.42	3.26	3.20	3.39	3.58	3.86
Metalworking Mach....	*	*	*	*	*	0.64	0.63	0.64	0.65	0.68
Spec. Industrial Mach.	*	*	*	*	*	0.71	0.70	0.65	0.65	0.68
Office & Computing Mach.	*	*	*	*	*	*	*	1.12	1.19	1.29
Rest of Industry Group..	*	*	*	*	*	*	1.87	0.98	1.09	1.22
Electrical Machinery.....	4.21	3.80	3.70	3.87	4.00	3.64	3.62	3.77	3.89	4.01
Electronic Components...	*	*	*	*	*	1.19	1.32	1.48	1.56	1.70
Rest of Industry Group..	*	*	*	*	*	2.46	2.30	2.28	2.33	2.31
Transportation Equip.....	1.12	1.04	0.95	0.87	0.75	1.32	1.35	1.37	1.44	1.42
Instruments.............	1.42	1.41	1.43	1.56	1.74	1.92	1.95	2.13	2.24	2.23
Measuring and Controlling.............	*	*	*	*	*	*	*	0.67	0.63	0.63
Rest of Industry Group..	*	*	*	*	*	*	*	1.47	1.61	1.60

Table 8 Employment in Massachusetts
Calendar Years 1970-1979
Percent Distribution
(continued)

Industry	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Nondurables..........	13.88	13.26	13.12	12.63	12.02	11.39	11.57	11.12	10.81	10.46
Food................	1.64	1.62	1.57	1.44	1.34	1.26	1.27	1.20	1.13	1.08
Textiles......	1.38	1.29	1.31	1.26	1.19	1.11	1.20	1.15	1.12	1.05
Apparel.............	2.18	2.11	2.07	2.00	1.84	1.76	1.87	1.77	1.67	1.58
Paper...............	1.55	1.47	1.44	1.43	1.39	1.23	1.25	1.22	1.20	1.16
Printing............	1.99	1.91	1.91	1.86	1.79	1.77	1.77	1.75	1.70	1.70
Chemicals...........	0.86	0.83	0.80	0.81	0.83	0.87	0.80	0.72	0.70	0.70
Rubber & Plastics...	1.49	1.41	1.46	1.50	1.46	1.22	1.28	1.25	1.27	1.27
Leather & Leather Prod.	1.59	1.43	1.35	1.16	1.03	1.01	1.04	0.94	0.93	0.85
Other Nondurables....	1.21	1.20	1.21	1.21	1.16	1.11	1.10	1.11	1.10	1.09
Nonmanufacturing..........	71.34	73.02	73.39	73.17	73.24	74.58	74.35	74.30	74.18	74.21
Construction.........	4.43	4.61	4.74	4.60	4.10	3.51	3.10	2.76	2.88	2.95
Transp. Comm., & Pub. Utilities...........	5.19	5.26	5.37	5.26	5.21	5.00	4.87	4.76	4.64	4.62
Wholesale & Ret. Trade.	21.89	22.50	22.30	22.15	22.16	22.52	22.48	22.09	21.66	21.83
Fin., Ins., & Real Est.	5.40	5.85	5.82	5.82	5.87	5.95	5.85	5.93	5.81	5.70
Services, Mining, Misc.	19.95	19.93	19.96	20.35	20.91	21.52	21.96	21.88	22.20	22.94
Government............	14.14	14.86	15.18	14.99	15.00	16.08	16.09	16.88	16.99	16.16
Federal..........	2.87	2.80	2.85	2.64	2.46	2.55	2.50	2.34	2.27	2.23
State............	11.27	12.06	12.33	12.35	12.53	13.51	13.60	3.59	3.65	3.61
Local............	#	#	#	#	#	#	#	10.95	11.06	10.32

* SIC Code Conversion

From 1970-1976 Local government included in state total.

Source: Massachusetts Division of Employment Security.

Table 9 Massachusetts Industrial Employment
and
Percent Distribution of Subsectors

		1975	1976	1977	1978	1979*
	Manufacturing..........	577,800	593,600	621,100	652,500	670,300
20	Food & Kindred Products.......	28,600	29,500	29,000	28,600	28,000
201	Meat Products.................	12.0%	10.0%	9.3%	10.4%	10.6%
202	Dairy Products................	18.3	18.5	18.0	16.4	18.0
203	Canned & Preserved Fruits.....	4.4	5.1	5.9	6.8	5.7
204	Grain Mill Products...........	2.1	1.8	1.8	2.3	1.7
205	Bakery Products...............	23.6	23.1	21.4	20.0	19.3
206	Sugar & Confectionary Prod....	10.4	13.1	14.6	13.5	13.6
207	Fats and Oil..................	1.3	1.2	1.2	1.2	1.2
208	Beverages.....................	11.9	10.3	10.3	10.0	8.6
209	Misc. Food & Kindred Prod.....	16.0	17.0	17.5	19.5	21.3
22	Textile Mill Products.........	25,200	27,700	27,900	28,200	27,200
221	Weaving Mills, Cotton.........	1.1%	1.5%	1.6%	1.7%	1.0%
222	Weaving Mills, Synthetics.....	10.9	11.6	13.0	14.2	15.8
223	Weaving Mills, Wool...........	7.6	8.3	8.6	8.7	8.0
224	Narrow Fabric Mills...........	6.1	6.1	4.9	5.1	6.3
225	Knitting Mills................	20.7	20.0	21.7	22.7	22.8
226	Textile Furnishing, Exc. Wool.	24.0	23.0	21.4	21.6	19.9
227	Floor Covering Mills..........	0.5	0.4	0.4	0.4	0.5
228	Yarn & Thread Mills...........	7.2	7.7	8.0	7.4	7.4
229	Misc. Textile Goods...........	21.9	21.5	20.2	18.1	18.4
23	Apparel.......................	41,100	43,200	42,800	42,100	41,100
231	Men's & Boys' Suits & Coats...	9.8%	10.2%	11.8%	10.9%	11.1%
232	Men's & Boys' Furnishings.....	11.8	11.9	11.2	11.8	10.9
233	Women's & Misses' Outerwear...	40.5	41.0	41.7	41.7	44.7
234	Women's & Misses' Undergarments	6.1	7.0	7.4	7.3	7.1
235	Hats, Caps & Millinery.........	1.2	1.1	1.0	0.8	0.7
236	Children's Outerwear...........	4.6	3.4	3.1	2.9	1.3
237	Fur Goods......................	#%	#%	#%	#%	#%
238	Misc. Apparel & Access.........	7.0	7.1	7.1	7.2	7.3
239	Misc. Fabricated Textiles......	19.1	18.2	16.8	17.5	16.9
24	Lumber & Wood Products.........	4,400	4,900	5,200	5,400	5,300
241	Logging Camps..................	1.3%	1.1%	0.9%	1.8%	1.9%
242	Sawmills & Planning Mills......	13.6	13.8	12.5	13.3	15.8
243	Millwork, Plywood & Rel........	25.7	26.0	24.4	24.9	27.5
244	Wood Containers................	14.0	13.8	13.0	12.1	11.9
245	Wood Building & Mobile Homes...	6.1	4.8	4.6	4.3	2.6
249	Misc. Wood Products............	39.5	40.5	44.6	43.5	40.2

Table 9 Massachusetts Industrial Employment
and
Percent Distribution of Subsectors

(continued)

		1975	1976	1977	1978	1979*
25	Furniture & Fixtures..........	8,400	8,200	8,400	8,700	8,300
251	Household Furniture...........	76.4%	80.7%	79.7%	75.9%	70.7%
252	Office Furniture..............	5.5	0.5	0.7	5.7	9.1
253	Public Building Furniture.....	1.3	2.4	2.3	2.5	2.3
254	Partitions & Fixtures.........	14.3	13.8	14.4	13.7	14.9
259	Misc. Furniture Fixtures......	2.5	2.6	2.7	2.3	2.9
26	Paper & Allied Products.......	27,900	28,900	29,400	30,400	30,200
261	Pulp Mills....................	#	#	#	#	#
262	Paperboard Mills exc. Bldg. Paper.........................	23.7	22.4	21.4	21.5	20.1
263	Paperboard Mills..............	3.7	4.3	4.3	4.3	4.6
264	Misc. Converted Paper Prod....	42.7	42.9	43.9	44.7	45.3
265	Paperboard Containers & Boxes.	29.0	30.3	30.2	28.9	29.6
266	Building Paper & Board Mills..	0.9	#	#	0.6	0.4
27	Printing, Publishing and Allied Products	40,300	41,000	42,200	42,900	44,100
271	Newspapers....................	31.2%	31.7%	31.5%	31.3%	30.2%
272	Periodicals...................	3.4	3.3	3.6	4.1	3.5
273	Books.........................	14.7	14.9	13.4	12.8	13.7
274	Misc. Publishing..............	2.0	1.9	2.0	1.9	1.4
275	Commercial Printing...........	30.1	30.2	31.2	31.3	33.5
276	Manifold Business Forms.......	1.2	1.2	1.4	1.4	1.5
277	Greeting Cards................	3.7	3.1	3.4	3.1	2.1
278	Blankbooks & Bookbinding......	10.6	11.1	11.2	12.0	11.4
279	Printing Trade Services.......	3.1	2.6	2.4	2.1	2.2
28	Chemicals & Allied Products...	19,800	18,400	17,300	17,700	18,100
281	Indust. Inorganic Chemicals...	5.6%	6.4%	5.6%	7.0%	5.5%
282	Plastic Materials & Synthetics	36.3	31.8	32.8	30.8	30.9
283	Drugs.........................	9.6	11.3	11.9	12.9	14.3
284	Soap, Cleaners & Toilet Goods	18.1	18.3	17.9	17.3	17.2
285	Paints & Allied Products......	6.5	7.0	6.6	7.1	7.2
286	Indust. Organic Chemicals.....	2.4	2.7	2.8	3.1	3.0
287	Agricultural Chemicals........	2.0	2.1	2.1	2.2	2.1
289	Misc. Chemical Prod..........	19.4	20.4	20.1	19.6	19.8

Table 9 Massachusetts Industrial Employment and Percent Distribution of Subsectors

(continued)

		1975	1976	1977	1978	1979*
30	Rubber & Misc. Plastic Prod...	27,800	29,600	30,200	32,100	33,000
301	Tires & Inner Tires..........	8.7%	6.6%	7.8%	7.1%	5.5%
302	Rubber & Plastic Footwear.....	9.8	7.2	3.0	2.1	3.2
304	Rubber & Plastic Hose and Belting......................	0.1	0.1	0.1	0.1	0.3
306	Fab. Rubber Prod. n.e.c.......	25.7	23.0	22.1	22.0	23.6
307	Misc. Plastic Prod...........	55.6	63.1	67.3	68.7	67.3
34	Fabricated Metal Prod.........	49,200	50,400	51,800	53,200	54,500
341	Metal Cans & Containers.......	2.2%	2.0%	2.3%	2.0%	2.1%
342	Cutlery, Hand Tools, & Hardware.....................	25.0	25.4	25.6	25.1	24.2
343	Plumbing & Heating, Nonelec....	2.9	2.4	2.2	2.5	2.7
344	Structural Metal Prod..........	18.5	18.2	17.2	17.6	18.1
345	Screw Machine Prod., Bolts.....	7.0	7.4	7.4	7.2	6.2
346	Metal Forgings & Stampings.....	12.7	11.4	11.4	11.4	12.2
347	Metal Services n.e.c...........	7.1	7.7	7.7	7.5	8.1
348	Ordnance & Accessories.........	8.4	9.1	9.5	9.2	9.6
349	Misc. Fabr. Metal Prod.........	16.2	16.4	16.7	17.5	17.0
35	Machinery, Except Electrical...	74,000	74,000	82,000	90,400	100,300
351	Engines & Turbines.............	9.7%	8.9%	7.5%	6.6%	5.7%
352	Farm Machinery.................	#	#	#	#	#
353	Const. & Rel. Machinery........	1.4	1.4	1.2	1.1	1.0
354	Metal Working Machinery........	20.3	19.6	19.4	18.6	17.5
355	Special Indust. Mach...........	20.0	20.7	19.0	18.8	17.0
356	Gen. Indust. Machinery.........	10.2	10.2	9.9	9.8	8.7
357	Office, Computing & Acct.......	28.1	28.9	33.0	34.8	39.4
358	Service Industry Mach..........	2.6	2.6	2.7	2.6	2.4
359	Misc. Mach. exc. Elec..........	7.7	7.6	7.0	7.6	8.2
36	Electric & Electronic Equip....	82,800	83,800	91,000	98,300	104,100
361	Elec. Dist. Equip..............	14.9%	15.0%	13.1%	6.1%	5.4%
362	Elec. Indust. Apparatus........	2.6	2.9	2.9	5.9	6.0
363	Household Appliances...........	1.4	1.6	1.4	1.3	1.4
364	Elec. Lighting & Wiring Equip..	9.2	9.8	10.1	10.3	10.0
365	Radio & TV Receiving Equip.....	3.6	4.1	4.0	4.1	2.8
366	Communications Equip...........	33.3	28.7	26.7	27.7	28.3
367	Elec. Components & Access......	31.5	34.2	37.8	39.9	43.0
369	Misc. Elec. Equip. & Supplies..	3.6	3.7	4.0	4.7	5.1

Table 9 Massachusetts Industrial Employment
and
Percent Distribution of Subsectors

(continued)

		1975	1976	1977	1978	1979*
37	Transportation Equipment......	30,000	30,200	33,200	36,400	37,000
371	Motor Vehicles Equip..........	13.3%	14.7%	16.7%	17.3%	17.5%
372	Aircraft & Parts..............	26.8	25.3	25.4	25.1	28.2
373	Ship & Boat Building..........	20.7	21.4	19.9	22.0	19.6
375	Motorcycles, Bicycles & Parts.	1.6	1.8	1.9	1.8	2.1
376	Guided Missiles & Space.......	37.1	36.2	35.6	33.4	33.1
379	Misc. Transp. Equip...........	0.5	0.6	0.5	0.4	0.3
38	Measuring & Controlling Instr.	43,700	45,100	51,500	56,700	58,000
381	Engineering & Scientific Inst.	6.2%	4.1%	5.7%	5.5%	5.8%
382	Measuring & Contr. Inst.......	32.3	31.8	32.1	30.9	31.9
383	Optical Instru. & Lenses......	9.8	10.6	10.3	9.9	11.1
384	Med. Instru. & Supplies......	9.7	10.1	10.5	11.8	11.2
385	Opthalmic Goods...............	12.7	12.9	11.8	10.8	12.1
386	Photographic Equip. & Supplies.	25.7	27.0	26.1	28.5	25.5
387	Watches, Clocks, & Watch Cases.	3.6	3.6	3.4	2.6	2.4
	Miscellaneous Manufacturing...	25,200	25,400	26,900	27,800	28,200
21	Tobacco Manufacturing.........	0.3%	0.3%	0.1%	0.01%	0.01%
29	Petroleum Refining............	4.5	4.8	5.3	5.3	6.1
39	Manuf. Industries n.e.c.......	95.2	94.9	94.6	94.6	93.8
	Construction..................	79,800	71,700	66,400	72,700	76,600
15	Building Construction.........	25.0%	24.5%	25.7%	28.7%	27.7%
16	General Construction..........	17.8	18.3	18.0	11.9	11.5
17	Special Trade Contractors.....	57.2	57.3	57.2	59.5	60.8
	Transp. & Public Util.........	113,700	112,800	114,900	117,300	120,100
41	Passenger Transp..............	13.1%	13.8%	13.5%	13.6%	13.5%
42	Motor Freight.................	23.6	23.8	24.4	24.9	24.8
44	Water Transportation..........	2.0	2.0	2.3	2.2	2.2
45	Air Transportation............	7.0	7.0	7.3	7.6	8.7
46	Pipe Lines, exc. Natural Gas..	#	#	#	#	#
47	Transportation Services.......	3.5	3.7	3.8	4.0	4.5
48	Communications................	34.4	32.5	32.0	31.5	30.8
49	Elec.,Gas & Sanitary Svc......	16.4	17.2	16.8	16.3	15.5

Table 9 Massachusetts Industrial Employment
and
Percent Distribution of Subsectors

(continued)

		1975	1976	1977	1978	1979*
	Wholesale & Retail Trade......	511,800	520,200	533,500	547,100	567,400
50	Wholesale Durable Goods.......	12.1%	11.7%	12.0%	11.6%	12.0%
51	Wholesale Nondurable Goods....	10.7	10.8	10.5	10.3	10.6
52	Bldg, Materials, Hardware Mobile Homes..................	2.5	2.4	2.4	2.3	2.4
53	General Merchandise...........	11.5	10.8	10.6	10.7	9.7
54	Food Stores...................	14.4	14.7	14.4	13.8	13.4
55	Automotive Dealers & Gas Stations......................	7.8	8.0	8.0	7.9	7.1
56	Apparel & Access. Stores......	5.5	5.5	5.4	5.7	5.9
57	Furniture & Home Furnishings..	2.8	2.9	2.7	2.9	2.6
58	Eating & Drinking Places......	21.4	22.4	23.0	23.8	25.3
59	Miscellaneous Retail..........	11.4	10.8	10.8	11.2	11.1
	Finance, Insurance & Real Estate	135,100	135,300	143,200	146,700	148,200
60	Banking.......................	33.3%	33.9%	33.8%	31.4%	31.0%
61	Credit Agencies...............	3.9	3.8	3.6	6.0	6.0
62	Security & Commodity Brokers..	5.2	5.2	5.2	5.2	5.2
63	Insurance.....................	33.4	33.4	33.4	33.1	32.6
64	Insurance Agents..............	9.2	9.4	9.4	9.7	9.9
65	Real Estate...................	12.1	11.7	12.1	12.1	12.2
66	Combination Offices...........	1.0	0.9	0.9	0.9	0.8
67	Holding & Investment Offices..	1.6	1.6	1.6	1.6	2.2
	Services......................	489,100	508,300	528,600	560,700	596,200
70	Lodgings......................	4.1%	4.2%	4.1%	3.9%	4.0%
72	Personal Services.............	5.2	4.9	4.9	4.5	4.2
73	Business Services.............	14.5	14.8	15.4	16.3	16.8
75	Automotive Repair.............	2.9	3.0	2.8	2.9	2.7
76	Miscellaneous Repair..........	1.5	1.4	1.2	1.2	1.3
78	Motion Pictures...............	1.0	0.9	0.9	0.7	0.7
79	Amusement & Recreation........	3.1	3.1	3.1	2.9	3.1
80	Health Services...............	37.4	37.0	37.2	35.0	32.6
81	Legal Services................	2.3	2.2	2.3	2.2	2.1
82	Educational Services..........	13.0	13.2	12.9	13.9	12.9
83	Social Services...............	3.8	4.2	5.1	5.4	5.5
84	Museums.......................	0.4	0.5	0.5	0.5	0.5
86	Membership Organizations......	4.1	4.1	3.6	3.3	6.0
88	Private Households............	#	#	#	0.4	0.5
89	Miscellaneous Services........	6.7	6.5	6.2	7.0	7.1

* Distribution based on September, 1979

# Percent was less than 0.0.

Source: 1. Current Employment Series of Mass. Div. of Employment Security in cooperation with the U. S. Department of Labor, Bureau of Labor Statistics.

2. Massachusetts Economic Policy Analysis (MEPA) Model Forecast by George Treyz and Roy Williams.

3. Employment and Wages in Establishment subject to the Mass. Employment Security Law.

Table 10 Massachusetts Projected Employment
By Industry
Federal Fiscal Years 1979-1982*

(in 000's)

Industry	FFY 1979	FFY 1980**	FFY 1981**	FFY 1982**
Nonagricultural Wage and Salary Employment - Total	2582.7	2659.3	2655.4	2677.0
Manufacturing..	670.3	681.1	669.4	676.4
Durables........	398.3	409.9	406.1	412.5
Lumber......................	5.4	4.9	4.2	4.3
Furniture...................	8.4	8.3	7.9	8.0
Stone, Clay, Glass...........	13.4	13.6	13.7	14.4
Primary Metals...............	17.4	17.1	16.1	16.5
Fabricated Metals....	54.3	54.0	51.2	50.2
Nonelectrical Mach...........	100.1	110.6	112.5	113.8
Engines & Turbines.........	5.7	6.3	6.3	6.3
Metalworking Mach..........	17.5	19.3	19.7	19.6
Spec. Industrial Mach......	17.2	18.9	19.5	19.7
Gen. Industrial Mach.......	8.7	9.6	9.7	9.9
Office & Computing Mach....	39.5	43.6	44.3	45.2
Rest of Industry Group.....	11.5	12.9	13.0	13.0
Electrical Machinery.........	103.6	108.2	110.2	112.7
Electronic Components......	44.6	46.3	47.3	49.5
Rest of Industry Group.....	59.0	61.9	63.0	63.1
Transportation Equipment.....	37.1	36.4	34.6	35.1
Motor Vehicles & Parts.....	6.6	6.2	5.6	6.2
Aircraft and Parts.........	9.6	10.8	10.4	10.1
Rest of Industry Group.....	20.9	19.4	18.5	18.7
Instruments.................	58.5	56.9	55.7	57.6
Measuring & Controlling....	16.3	17.2	17.0	17.2
Rest of Industry Group.....	42.2	39.7	38.7	40.4
Nondurables..................	272.0	271.2	263.3	263.9
Food........................	27.9	29.0	29.3	29.0
Textiles....................	27.5	27.1	26.5	27.1
Apparel.....................	41.2	41.0	40.3	40.3
Paper.......................	30.2	30.3	29.4	29.6
Printing....................	43.7	44.4	42.5	41.9
Chemicals...................	18.2	18.1	17.8	18.1
Synthetic Materials.......	5.4	5.3	5.0	5.2
Rest of Industry Group....	12.7	12.8	12.9	12.8

Table 10 Massachusetts Projected Employment
By Industry
Federal Fiscal Years 1979-1982*
(in 000's)
(continued)

Industry	FFY 1979	FFY 1980**	FFY 1981**	FFY 1982**
Rubber.....................	33.0	30.9	28.0	28.5
Leather....................	22.4	21.1	20.2	19.7
Other Nondurables..........	27.9	29.3	29.3	29.9
Nonmanufacturing.............	1912.5	1978.2	1986.0	2000.6
Construction...............	75.4	81.2	78.0	83.9
Transp., & Utilities.......	119.5	120.4	119.1	119.7
Wholesale & Retail Trade...	563.2	581.4	589.2	594.4
Finance, Insurance and Real Estate...............	147.7	150.9	151.8	150.7
Services & Misc............	587.7	621.2	626.1	628.6
Government.....	418.9	423.4	421.6	423.3
Federal..............	57.5	60.0	60.8	61.3
State................	92.2	97.0	98.1	99.3
Local................	269.2	266.4	262.8	262.8

* A Federal Fiscal Year begins on October 1st and ends the following September 30th.

** Projected.

Source: Current Employment Series of the Massachusetts Division of Employment Security in cooperation with the U. S. Department of Labor , Bureau of Labor Statistics.
Massachusetts Economic Policy Analysis (MEPA) Model Forecast by George Treyz and Roy Williams.

Table 11 Massachusetts Manufacturing Employment
as
Percent of U. S. Employment
Federal Fiscal Years 1978-1982*

SIC Code	Industry	FFY 1978	FFY 1979	FFY 1980**	FFY 1981**	FFY 1982**
	Durables................	3.08	3.14	3.31	3.46	3.44
24	Lumber........................	0.72	0.71	0.75	0.80	0.77
25	Furniture.....................	1.78	1.72	1.77	1.82	1.79
32	Stone, Clay, Glass............	1.86	1.89	1.94	2.01	2.04
33	Primary Metals................	1.42	1.39	1.49	1.56	1.60
34	Fabricated Metals.............	3.20	3.16	3.23	3.27	3.21
35	Nonelectrical Machinery.......	3.86	4.09	4.38	4.57	4.65
351	Engines & Turbines..........	4.35	4.07	4.53	4.66	4.71
354	Metalworking Mach...........	4.79	4.88	5.34	5.50	5.56
355	Spec. Industrial Mach.......	8.12	8.19	8.32	8.29	8.05
356	Gen. Industrial Mach........	2.74	2.65	2.81	2.81	2.77
357	Office & Computing Mach.....	8.51	10.54	10.76	11.40	12.10
	Rest of Industry Group.......	1.27	1.11	1.21	1.24	1.23
36	Electrical Machinery....	4.91	4.97	5.01	5.02	5.12
367	Electronic Components........	9.09	9.73	12.42	14.19	14.88
	Rest of Industry Group.......	3.76	3.63	3.48	3.35	3.20
37	Transportation Equipment.......	1.82	1.79	1.92	1.91	1.77
371	Motor Vehicles & Parts.......	0.63	0.65	0.80	0.86	0.84
372	Aircraft & Parts.............	1.79	1.63	1.67	1.59	1.56
	Rest of Industry Group.......	4.39	4.40	4.23	4.07	3.80
38	Instruments....................	8.62	8.55	8.24	8.40	8.55
382	Measuring & Controlling......	7.66	7.27	7.42	7.53	7.66
	Rest of Industry Group.......	9.08	9.18	8.65	8.83	8.99
	Nondurables.............	3.33	3.28	3.28	3.23	3.20
20	Food...........................	1.68	1.63	1.65	1.66	1.67
22	Textiles.......................	3.13	3.07	3.04	3.05	3.03
23	Apparel........................	3.20	3.12	3.13	3.12	3.09
26	Paper.....	4.32	4.26	4.20	4.14	4.11
27	Printing.......................	3.62	3.55	3.48	3.42	3.39
28	Chemicals......................	1.60	1.64	1.60	1.58	1.56
282	Synthetic Materials..	2.62	2.50	2.42	2.33	2.24
	Rest of Industry Group......	1.37	1.43	1.40	1.40	1.39
30	Rubber........................	4.26	4.27	4.45	4.45	4.40
31	Leather......................	9.14	9.07	8.86	8.86	8.73
39	Other Nondurables............	6.21	6.13	6.52	6.67	6.67

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* A Federal Fiscal Year begins October 1st and ends the following September 30th.

** Projected

Source: Massachusetts Economic Policy Analysis (MEPA) Model Forecast by George Treyz and Roy Williams.

V. Employment Developments and Outlook by Occupation

A. Employment Trends

This section contains information on the occupations of employed persons and the distribution of occupations by age and sex. For the last several years, the Bureau of Labor Statistics has provided Massachusetts with an estimated annual occupational profile of the state's work force. Unfortunately, this profile is subject to considerable sampling error due to the size of the survey. The Current Population Survey (CPS) has a sample of approximately 1,600 households in Massachusetts. This number is not large enough to compensate for the fluctuations in statistical accuracy when the sample total is broken out into its component parts. Nevertheless, the CPS occupational profile does provide useful information on changes in the composition of the state's employment.

Table 12 provides data on the employed in Massachusetts by their occupational category from 1976 to 1979. The table illustrate that the majority of women have white collar jobs, although their distribution in this sector is uneven. Women are well represented in professional and technical positions, but they are only one-quarter of the managers and administrators and compose over three-quarters of the clerks. The only blue collar occupation in which women are a significant segment is as operatives, whereas women hold over half the service jobs.

Employed youth (16-19) are rather evenly distributed among the occupations. However, because young people lack experience, and in many cases job training as well, they tend to occupy the lower paid entry positions in each category.

An occupational distribution of employed persons in Massachusetts and the United States is in Table 14 . A quick observation shows that women are more active in the labor force here than nationally, and that we have proportionally fewer minorities The data also points out that women in Massachusetts occupy a greater percentage of the white collar jobs than their counterparts nationally. Also women in Massachusetts are more likely to have a blue collar job in a craft or operative occupation than women nationally.

The state's occupational distribution of female workers generally follows national trends for sales workers, clerical workers, and service workers.

Table 12 Employed Persons 16+ By Occupation (in 000's)

Occupation	Both Sexes 1976	1977	1978	1979	Male 1976	1977	1978	1979	Female 1976	1977	1978	1979	Youth 16 - 19 Both Sexes 1976	1977	1978	1979
TOTAL	2499	2555	2663	2731	1472	1475	1522	1544	1028	1080	1141	1187	234	232	244	245
White Collar Workers	1337	1354	1441	1502	662	656	704	714	675	699	737	787	78	77	83	86
Professional and Technical Workers	462	469	488	497	261	254	274	281	201	215	214	216	7	4	7	5
Managers & Administrators	252	252	278	300	206	206	224	224	46	46	54	76	3	2	3	2
Sales Workers	149	150	159	164	88	88	91	89	61	62	68	75	24	21	24	25
Clerical Workers	474	483	516	541	107	108	115	120	367	375	401	421	45	49	51	55
Blue Collar Workers	799	830	838	830	626	648	638	645	173	182	199	186	78	81	86	83
Crafts & Kindred Workers	314	305	308	333	301	293	289	316	13	12	19	17	11	11	17	22
Operatives exc. Transp.	310	330	339	324	169	181	177	173	140	149	161	152	30	31	36	29
Transportation Equipment	64	81	82	76	60	74	75	70	4	7	7	6	4	4	3	3
Nonfarm Laborers	111	114	109	97	96	101	97	86	15	14	12	11	32	33	27	27
Service Workers	352	360	375	388	175	163	172	175	177	197	203	213	76	71	73	74
Private Households	22	18	15	15	1	1	1	1	21	17	14	15	11	6	4	4
Other Services	330	342	359	373	174	162	172	175	156	180	188	198	64	66	69	70
Farmworkers	11	10	10	11	9	8	7	9	2	2	2	2	2	2	1	2
Farmers & Managers	3	4	3	3	2	3	2	3	0	0	1	0	--	--	0	0
Farm Laborers and Supervisors	8	6	7	8	6	4	5	6	2	2	2	1	2	2	1	2

Note: Due to rounding the occupational groups may not add to total.

Source: Current Population Survey annual averages.

Table 13 Occupational Distribution of Employment
Massachusetts Annual Averages

Occupation	Both Sexes					Males				
	1979	1978	1977	1976	1975	1979	1978	1977	1976	1975
TOTAL ALL WORKERS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total White Collar Workers	55.0	54.1	53.0	53.0	55.3	46.3	46.2	44.5	45.0	47.2
Professional & Technical	18.2	18.3	18.4	18.5	19.2	18.2	18.0	17.2	17.7	19.0
Managers & Administrators	11.0	10.4	9.9	10.1	9.9	14.5	14.7	14.0	14.0	14.1
Sales Workers	6.0	6.0	5.9	6.0	6.7	5.8	6.0	6.0	6.0	6.8
Clerical Workers	19.8	19.4	18.9	19.0	19.5	7.8	7.6	7.3	7.3	7.3
Total Blue Collar Workers	30.4	31.5	32.5	32.0	30.2	41.8	41.9	44.0	42.5	41.5
Craft & Kindred Workers	12.2	11.6	12.0	12.6	12.8	20.5	19.0	19.9	20.4	20.9
Operatives, exc. Transp.	11.9	12.7	12.9	12.4	11.2	11.2	11.7	12.2	11.5	10.6
Transportation Operatives	2.8	3.1	3.2	2.6	2.6	4.5	4.9	5.0	4.1	4.2
Nonfarm Laborers	3.6	4.1	4.5	4.4	3.6	5.6	6.4	6.8	6.5	5.7
Service Workers	14.2	14.1	14.1	14.1	14.2	11.3	11.3	11.1	11.9	10.9
Farm Workers	0.4	0.4	NA	NA	0.3	0.6	0.5	NA	NA	0.5

Source: 1979 CPS Preliminaries; 1978, 1977, 1976, 1975 Geographic Profile of Employment and Unemployment.
U. S. Department of Labor, Bureau of Labor Statistics

Table 14 Occupational Distribution - Massachusetts and United States
1978-EEO-1 Report Summaries
For Massachusetts and United States*

Race and Sex	Total Employment		White Collar											
			Total		Officials and Managers		Professionals		Technicians		Sales Workers		Clerical	
	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.
TOTAL BOTH SEXES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Males	56.2	60.0	50.0	50.8	81.5	82.7	62.1	66.1	59.8	62.5	48.3	49.3	17.4	17.8
Total Females	43.8	40.0	50.0	49.2	18.5	17.3	37.9	33.9	40.2	37.5	51.7	50.7	82.6	82.2
White Total	92.0	82.1	94.5	88.2	96.3	93.1	95.2	90.8	92.9	86.2	94.5	88.5	93.4	84.0
White Males	51.9	49.9	47.5	46.1	78.8	77.6	59.0	60.9	55.9	55.4	45.4	44.2	16.1	14.6
White Females	40.2	32.2	47.0	42.1	17.6	15.5	36.2	29.9	37.0	30.7	49.1	44.3	77.2	69.4
Minority Total	8.0	17.9	5.5	11.8	3.7	6.9	4.8	9.2	7.1	13.8	5.5	11.5	6.6	16.0
Minority Males	4.3	10.1	2.6	4.7	2.8	5.1	3.1	5.2	4.0	7.1	2.9	5.0	1.3	3.2
Minority Females	3.7	7.8	2.9	7.0	0.9	1.8	1.8	4.0	3.2	6.7	2.6	6.4	5.3	12.8
Black Total	4.7	11.2	3.4	6.8	2.1	3.7	2.3	4.0	4.4	8.2	3.3	6.8	4.8	10.1
Black Males	2.3	6.1	1.4	2.4	1.5	2.6	1.3	1.9	2.3	3.5	1.6	2.8	0.9	1.9
Black Females	2.3	5.1	2.1	4.4	0.6	1.1	1.0	2.1	2.1	4.7	1.7	4.0	4.0	8.2
Spanish Surnamed Americans Total	2.5	5.0	1.1	3.1	1.0	2.0	0.7	1.8	1.2	3.3	1.6	3.4	1.1	4.1
Spanish Surnamed American Males	1.5	3.1	0.6	1.4	0.8	1.6	0.5	1.2	0.7	2.1	1.0	1.6	0.3	0.9
Spanish Surnamed American Females	1.0	1.9	0.5	1.7	0.2	0.5	0.2	0.6	0.5	1.2	0.6	1.8	0.8	3.2
Oriental & Pacific Islanders Total	0.7	1.3	0.9	1.6	0.4	0.8	1.7	3.2	1.4	2.0	0.4	0.9	0.6	1.5
Oriental & Pacific Islander Males	0.4	0.7	0.5	0.8	0.3	0.6	1.2	2.0	0.9	1.2	0.2	0.5	0.1	0.4
Oriental & Pacific Islander Females	0.3	0.6	0.4	0.8	0.1	0.2	0.5	1.2	0.6	0.8	0.2	0.4	0.5	1.1
American Indians Total	0.1	0.4	0.1	0.3	0.2	0.4	0.1	0.2	0.1	0.4	0.1	0.3	0.1	0.4
American Indian Males	0.1	0.3	0.1	0.2	0.1	0.3	0.1	0.2	0.1	0.2	0.1	0.2	**	0.1
American Indian Females	**	0.1	**	0.2	**	0.1	**	0.1	**	0.1	**	0.1	0.1	0.3

Table 14 Occupational Distribution - Massachusetts and United States
1978-EEO-1 Report Summaries
For Massachusetts and United States*
(continued)

Race and Sex	Blue Collar									
	Total		Craft Workers		Operatives		Laborers		Service Workers	
	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.
TOTAL - BOTH SEXES..........	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Males.................	69.6	74.7	85.9	91.4	63.4	68.1	57.9	66.1	45.7	45.4
Total Females...............	30.4	25.3	14.1	8.6	36.6	31.9	42.1	33.9	54.3	54.6
White Total.....................	89.9	77.5	93.9	86.2	88.7	76.1	86.2	68.2	85.3	69.4
White Males...................	63.3	59.0	81.1	79.5	56.6	52.6	50.1	44.7	38.5	30.4
White Females.................	26.6	18.5	12.8	6.7	32.1	23.5	36.1	23.5	46.8	38.9
Minority Total..................	10.1	22.5	6.1	13.8	11.3	23.9	13.8	31.8	14.7	30.6
Minority Males................	6.3	15.6	4.8	11.8	6.8	15.5	7.9	21.3	7.2	15.0
Minority Females..............	3.8	6.9	1.3	1.9	4.5	8.4	5.9	10.4	7.5	15.7
Black Total	5.1	14.3	3.3	8.0	5.7	16.1	6.6	19.1	10.3	21.5
Black Males....................	3.2	9.9	2.7	6.9	3.4	10.5	3.6	12.8	4.8	9.8
Black Females..................	1.8	4.4	0.5	1.1	2.3	5.7	3.0	6.3	5.5	11.7
Spanish Surnamed Americans.......	4.5	6.9	2.5	4.7	5.0	6.5	6.6	11.1	3.4	7.0
Sp. Surnamed Americans Male...	2.8	4.9	1.8	4.1	3.1	4.3	4.0	7.6	1.9	4.1
Sp. Surnamed Americans Female..	1.7	2.0	0.7	0.6	1.9	2.2	2.6	3.5	1.5	2.9
Oriental & Pacific Islander Total .	0.4	0.8	0.2	0.6	0.5	0.8	0.4	1.0	0.8	1.7
Oriental & Pacific Islander Males	0.2	0.4	0.2	0.5	0.2	0.4	0.2	0.5	0.4	0.8
Oriental & Pacific Islander Females	0.2	0.3	0.1	0.1	0.3	0.4	0.3	0.5	0.4	0.9
American Indian Total	0.1	0.5	0.1	0.5	0.1	0.5	0.2	0.6	0.2	0.4
American Indian Males..........	0.1	0.4	0.1	0.4	0.1	0.3	0.1	0.4	0.1	0.2
American Indian Females........	**	0.1	**	**	**	0.1	0.1	0.2	0.1	0.2

* Private Employers with at least 100 employees.

** Less than 0.05 percent.

Source: Survey Branch, Office of Program Planning and Evaluation, Equal Opportunity Commission.

Sample: Nationwide - 38,993 units, Massachusetts -4,599 units, 2,089 employers. The total employment figure nationwide was 36,028,647, for Massachusetts 989,913.

Table 15 Full And Part-Time Status
Massachusetts Labor Force
Annual Averages
(in 000's)

	Full-Time Labor Force					Part-Time Labor Force			
		Employed		Unemployed (Looking For Full-time Work)			Employed Voluntarily	Unemployed (Looking for Part-time Work)	
Year	Total	Full-time Schedules	Part-time For Economic Reasons	Number	Percent of Full-time Labor Force	Total	Employed Part-time	Number	Percent of Part-time Labor Force
1979	2369.0	2173.0	88.0	108.0	4.6	522.0	470.0	52.0	10.0
1978	2338.0	2121.0	92.0	126.0	5.4	497.0	450.0	47.0	9.4
1977	2287.0	2018.0	98.0	171.0	7.5	493.0	439.0	54.0	11.0
1976	2258.0	1957.0	97.0	204.0	9.0	505.0	446.0	59.0	11.6
1975	2229.0	1881.0	99.0	248.0	11.1	506.0	449.0	57.0	11.2

Source: 1979 CPS Preliminareis; 1978, 1977, 1976, 1975 Geographic Profile of Employment and Unemployment.
U. S. Department of Labor
Bureau of Labor Statistics

B. Employment Projections by Occupation

The occupational projections which appear in this section are from Employment Requirements by Occupation, by Industry 1976-1985. This publication was prepared by the Occupation/Industry Research Department of the Massachusetts Division of Employment Security. The projections were made following procedures outlined in BLS Bulletin 1606, the methodology is fully explained in the report.*

During the course of the nine years projected, approximately one and a quarter million job openings will occur in the state. Some 423,000 of these jobs openings will be due to growth -- about one-third of the total. The rest will be needed as replacements.

The greatest absolute changes are expected in the clerical, service and professional occupations. The greatest percentage increases are projected for clerical workers, service workers, and managers. Above average job openings due to growth are seen for clerical workers, professionals and crafts workers.

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* The information in the report should be used as indicators of trend, relative magnitude and probable direction rather than a specific forecasts of actual employment levels. The information should also be used in conjunction with other data prepared by this agency and other public and private organizations - for example, the series on Vocational Education and Workforce Planning prepared by the Labor Area Research Department.

Table 16 Massachusetts Employment by Occupation
1976 and Projected 1985

Occupational Title	Employment			Annual Labor Demand 1976 - 1985				
	1976	1985	Net Changes 1976-1985	Average Annual Openings	Openings Due to Growth		Openings Due To Separations	
					Number	percent	Number	Percent
Total - All Occupations	2,450,430	2,873,240	422,810	142,370	46,980	33.0	95,390	67.0
Prof., Tech., Kindred	434,650	500,960	66,320	20,470	7,310	35.7	13,160	64.3
Managers	260,570	309,470	48,900	16,490	5,430	32.9	11,060	67.1
Sales Workers	154,030	179,880	25,850	10,400	2,870	27.6	7,530	72.4
Clerical Workers	469,510	581,830	112,320	32,390	12,480	38.5	19,910	61.5
Crafts & Kindred Workers	289,810	334,480	44,670	14,140	4,960	35.1	9,180	64.9
Operatives	378,220	424,900	46,680	18,900	5,200	27.5	13,700	72.5
Service Workers	342,020	414,160	72,140	24,910	8,010	32.2	16,900	67.8
Laborers except Farm	98,380	108,940	10,560	4,000	1,170	29.3	2,830	70.7

Summed parts may not equal totals because of rounding. Data for Farmers and Farm Workers not listed.

Source: Employment Requirements by Occupation, by Industry 1976-1985.

Table 17 Annual Labor Demand
Massachusetts 1976 - 1985, Openings Due to Growth
(Occupations Whose Annual Openings Due to Growth Will Exceed 200)

Rank	Occupation	Number of Openings
1.	Secretaries (General)............	3,410
2.	Sales Clerks	2,200
3.	Cashiers.........................	1,050
4.	Waiters and Waitresses...........	760
5.	Nurses Aides.....................	730
6.	Cooks............................	670
7.	Electronics Technicians..........	570
8.	Carpenters.......................	560
9.	Bookkeepers......................	490
10.	Child Care Workers...............	460
11.	Clerk-Typists....................	460
12.	Typists..........................	460
13.	Secretaries (Medical)............	450
14.	Drafters.........................	360
15.	Plumbers and Pipefitters.........	360
16.	Food Workers.....................	350
17.	Real Estate Agents & Brokers.....	330
18.	Construction Workers.............	320
19.	Air Conditioning, Heating, and Refrigeration Mechanics..........	300
20.	Electricians.....................	300
21.	Painters and Apprentices.........	270
22.	Auto Mechanics...................	260
23.	Billing Clerks...................	240
24.	Guards...........................	240
25.	Secretaries (Legal)..............	230

(Occupations Whose Annual Openings Due to Growth
Will be Less Than The Annual Separations)

Rank	Occupation	Number of Openings
1.	Compositors and Typesetters......	-100
2.	Stenographers....................	- 60
3.	Bus Drivers	- 50
4.	Keypunch, Data Entry Operators...	- 40
5.	Cabinet Makers...................	- 20
6.	Cosmetologists	- 20
7.	Bakers...........................	- 10
8.	Barbers	- 10
9.	Drill Press Operators	- 10
10.	Furniture & Wood Finishers.......	- 10
11.	Grinding Machine Operators.......	- 10
12.	Upholsterers.....................	- 10

Source: "Employment Requirements by Occupation, by Industry 1976-1985" Occupational/Industry Publication, Massachusetts Division of Employment Security, December 1979.

VI. Trends In Unemployment

The unemployment rate is the most widely used indicator in measuring the performance of a state's economy. It is designed to measure the portion of the overall labor force that is unutilized at any given period of time. One of the major sources of data at the national and state level is the Current Population Survey (CPS) which is a household-based survey conducted monthly by the Bureau of Census for the United States Department of Labor's Bureau of Labor Statistics. The unemployment rate is calculated by dividing the number of people who are classified as unemployed (someone who did not work at all during the reference week, had looked for work at sometime during the past four weeks, and was available for work at the time of the survey) by the civilian labor force (the sum of the employed and unemployed).

This section will examine estimates of the annual average unemployment rates for Massachusetts, the United States, and the other ten largest States from 1970 to 1979. In addition, demographic data is provided to view the unemployment situation of different components within the Massachusetts economy. However, our discussion will begin by examining the trend in claims.

Table 21 shows that continued weeks claimed in 1980 had been running below 1979 levels until April. In May continued claims ran 18 percent higher than a year earlier, while initial claims were over 60 percent above May 1979. Of course, one month is not really indicative, but claims are expected to show an upward trend for the rest of 1980 as the state's economy slows due to the nationwide recession.

The data on Table 22 shows that with the exception of the years 1970 and 1979, the state's unemployment rate was significantly higher than the nation's throughout the decade. While virtually everywhere unemployment rates are now much lower than they were during the mid-seventies recession, the improvement in Massachusetts has been especially dramatic. In 1979, the Bay State's annual average unemployment rate was less than half what it had been in 1975, and was lower than the national rate for the first time since 1970. In fact, with the exception of one month, the Massachusetts unemployment rate has been lower than the U. S. rate from April 1979 through June 1980.

Unemployment rates will certainly rise in the near future as Massachusetts follows the nation into a recession. The unemployment rate should remain high through the Fall and Winter, with no significant improvement until perhaps the late Spring. At present we are forecasting a state unemployment rate of 8.0 percent for the year October 1, 1980 - September 30, 1981, and an 8.5 percent rate nationally. The state is affected by national trends, so the forecast for Massachusetts will be adjusted depending on the severity of the national recession.

In any case, we expect Massachusetts will weather the economic slowdown better than the rest of the country, and that unemployment here will average lower than it will nationally. This is largely due to our industrial mix. Many of our service and high technology manufacturing firms will continue to grow, although perhaps at a slower rate. The two industries which are being hurt the most nationally, automobiles and construction, are proportionately not as important industries here as elsewhere. Also, we do not anticipate much growth in the labor force over the next year; that is, not many people entering the labor force at a time when there would not be enough new jobs to employ them.

Table 18 Annual Average Unemployment Rates
By Occupation
Massachusetts

	1979	1978	1977	1976
TOTAL	5.5	6.1	8.1	9.5
White Collar Total	3.6	3.7	4.8	6.1
Professional & Technical	2.6	2.8	2.8	4.0
Managers & Administrators	2.5	3.0	4.1	4.2
Sales Workers	5.0	3.7	6.0	6.4
Clerical Workers	4.7	4.9	6.7	8.8
Blue Collar Workers	7.1	7.3	10.7	12.5
Craft & Kindred Workers	4.8	5.6	8.5	10.7
Operatives, Except Transportation	6.7	7.1	10.3	12.5
Transportation Equipment	6.4	7.2	10.7	10.2
Nonfarm Laborers	15.9	12.5	16.8	18.4
Service Workers	5.3	6.2	6.5	7.7
Farm Workers	7.1	4.5	NA	9.4

Source: 1976, 1977, and 1978 Geographic Profile of Employment and Unemployment, and Preliminary Data for 1979, CPS.

Table 19 Annual Average Unemployment Rates
By Age and Sex
Massachusetts

Year	Total 16+	Men 16+	Women 16+	Men 20+	Women 20+	Both Sexes 16-19
1979	5.5	5.4	5.7	4.3	4.7	15.0
1978	6.1	5.8	6.5	4.9	5.2	15.9
1977	8.1	7.9	8.3	6.7	7.1	18.9
1976	9.5	8.8	10.5	7.9	9.2	19.4
1975	11.2	11.3	11.0	9.9	9.8	21.9

Source: Geographic Profile of Employment and Unemployment, 1975, 1976, 1978, and preliminary data for 1979.

Table 20 Unemployed Persons by Duration of Unemployment
In Massachusetts

Year	Total Unemployed (in 000's)	Percent Distribution By Duration of Unemployment					
		Total	Less Than 5 Weeks	5-14 Weeks	15-26 Weeks	27-51 Weeks	52 Weeks or Longer
1979	160	100.0	43.6	32.2	13.2	6.6	4.4
1978	173	100.0	41.1	34.0	11.7	5.3	7.9
1977	225	100.0	35.3	28.8	12.9	11.3	11.7
1976	263	100.0	56.9		15.2	12.7	15.2
1975	305	100.0	59.3		18.6	12.7	9.4

Source: Geographic Profile of Employment and Unemployment 1975, 1976, 1977, 1978, and preliminary data for 1979.

Table 21 Claims Data
Monthly Survey Week*
January 1979-May 1980

	State UI Continued Claimants	State UI Initial Claims	Federal Civilian Continued Claims	Unemployed Exhaustees
1979				
January.............	96,349	9,947	1,199	22,567
February............	98,979	11,842	649	22,005
March...............	90,832	7,670	564	21,740
April...............	75,193	10,221	485	21,437
May.................	60,740	7,174	554	21,088
June................	61,529	11,632	656	20,216
July................	74,598	9,407	844	19,469
August..............	64,677	7,003	1,001	18,658
September...........	54,500	6,683	1,029	18,103
October.............	54,774	8,037	1,097	17,460
November............	62,660	11,140	995	16,511
December............	73,245	15,683	997	16,088
1979 Annual Average.	72,340	9,703	839	19,612
1980				
January.............	89,621	9,662	917	16,012
February............	87,752	11,684	519	15,119
March...............	83,718	7,822	481	15,266
April...............	76,491	9,476	413	15,680
May.................	71,882	11,664	444	16,246
5 Month Average	81,893	10,062	555	15,665

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* The week containing the twelfth of the month.

Table 22 Unemployment Rates for the United States, And The Ten Largest States (16 Years and Over, 1970-1979)

Annual Averages	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
UNITED STATES	4.9	5.9	5.6	4.9	5.6	8.5	7.7	7.0	6.0	5.8
Massachusetts	4.6	6.6	6.4	6.7	7.2	11.2	9.5	8.1	6.1	5.5
California	7.3	8.8	7.6	7.0	7.3	9.9	9.2	8.2	7.1	6.2
Florida	4.3	4.9	5.1	4.3	6.2	10.7	9.0	8.2	6.6	6.0
Illinois	4.1	5.1	5.1	4.1	4.2	7.1	6.5	6.2	6.1	5.5
Michigan	6.7	7.6	7.0	5.8	7.4	12.5	9.4	8.2	6.9	7.8
New Jersey	4.6	5.7	5.8	5.6	6.3	10.2	10.4	9.4	7.2	6.9
New York	4.5	6.6	6.7	5.4	6.4	9.5	10.3	9.1	7.7	7.1
Ohio	5.4	6.5	5.6	4.3	4.8	9.1	7.8	6.5	5.4	5.9
Pennsylvania	4.5	5.4	5.4	4.8	5.1	8.3	7.9	7.7	6.9	6.9
Texas	4.4	5.0	5.1	3.9	4.3	5.6	5.7	5.3	4.8	4.2
Rank of Massachusetts	6th*	7th#	7th	9th	8th	9th	8th	5th	3rd**	2nd**
Mass. - U. S. Difference	-0.3	+0.7	+0.9	+1.8	+1.6	+2.7	+1.8	+1.1	+0.1	-0.3

* Tied with New Jersey
# Tied with New York
** Tied with Illinois

Table 23 1980 Unemployment Rates
Seasonally Adjusted
United States and Ten Large Industrial States

	January	February	March	April	May	June
United States	6.2	6.0	6.2	7.0	7.8	7.7
Massachusetts	5.0	4.8	4.9	5.3	6.4	6.8
California	5.8	6.1	6.0	7.1	7.1	7.3
Florida	5.1	5.2	5.2	5.5	5.9	6.4
Illinois	7.1	7.0	6.9	7.4	7.9	8.6
Michigan	9.5	10.3	10.2	12.2	14.4	14.1
New Jersey	6.9	5.4	6.9	6.6	8.4	7.9
New York	7.7	7.6	6.9	7.2	8.0	7.3
Ohio	6.3	6.1	5.9	7.4	9.4	9.7
Pennsylvania	7.2	6.8	6.8	7.7	8.3	7.7
Texas	4.8	4.9	5.8	5.4	5.4	5.5
Rank of Massachusetts	2nd	1st	1st	1st	2nd	3rd
Mass. - U. S. Difference	-0.8	-1.2	-1.3	-1.7	-1.4	-0.9

Characteristics of Insured Unemployed

The characteristics of the insured unemployed which are contained in the following tables were obtained from a sample survey of approximately 30 to 40 percent of the active file of claimants. The survey was undertaken within any particular week during the given reference period for each local office. Information on the characteristics of the insured unemployed may help to achieve the following objectives:

a. Promote employment opportunities
b. Improve utilization of manpower resources
c. Guide economic policies
d. Improve public information and understanding

The data from the table give the distribution levels of the characteristics for the regular claimants found for each survey period. The distribution levels given do not necessarily reflect the same levels of those people who are unemployed and who are not insured under the Massachusetts Employment Security Law. Approximately 30 percent of the state's unemployed persons are not insured under this law.

The sample indicates that the largest portion of claimants falls between the ages of 25 to 34 and the percentages decrease as age increases. The sex composition shows that there are more men than women claimants and that the percentage difference seems to be lessening over the years. Over nine out of ten claimants are in the white racial group. Claimants with a Spanish surname accounted for under 2 percent of those collecting in every survey except that for March 1979.

The occupational attachment of the claimants should be analyzed with the consideration that the distribution is reflected as a subset of the total. Those occupations that employ more individuals tend to have a higher insured unemployment percentage. It is worth while noting that there has been an increase in the professional, technical and managerial claimants in the recent survey. The industrial attachment of the claimants has taken a slight shift from manufacturing industries to the services and government sectors.

In analyzing the average weekly wage, one should note this definition:

Average Weekly Wage:	An amount equal to one-twenty-sixth of the total wage reported for an individual in the two highest quarters of his last period or if wages were reported for not more than two quarters the average weekly wage was equal to one-thirteenth of the highest quarter's reported wage.

Table 24 Selected Characteristics of Insured Unemployed
Statewide

	Statewide-Percentage of Regular Program								
	May-June 1977	Sept.-Oct. 1977	Dec.-Jan. 1978	May-June 1978	Aug.-Sept. 1978	Oct.-Dec. 1978	March 1979	June 1979	December 1979
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Age									
Under 25	20.7	19.9	21.9	18.1	18.2	19.1	22.2	18.8	17.9
25 - 34	25.9	25.6	25.7	28.1	27.6	27.8	27.6	28.0	28.6
35 - 44	15.8	16.2	15.5	16.0	17.6	15.7	16.6	16.9	17.1
45 - 54	15.3	15.2	16.0	14.3	15.2	14.4	15.6	15.2	15.0
55 - 64	13.8	13.8	13.6	14.1	12.7	13.1	12.5	13.8	14.0
65 & Over	8.3	9.1	7.1	9.0	8.3	9.5	5.1	6.9	7.2
INA	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.5	0.2
Sex									
Men	62.6	58.1	65.2	63.0	54.3	57.7	70.2	55.1	55.6
Women	37.4	41.9	34.8	37.0	45.6	42.3	29.8	44.9	44.4
INA	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Ethnic Group									
White	92.3	93.2	94.4	90.7	92.2	92.2	93.1	94.5	94.4
Nonwhite	4.8	5.1	4.6	6.6	6.0	5.9	6.7	5.4	5.1
INA	2.9	1.7	1.0	2.7	1.8	1.9	0.2	0.0	0.5
Spanish Surname	1.8	1.0	1.0	1.9	1.9	1.3	4.8	1.7	1.3

Table 24 Selected Characteristics of Insured Unemployed Statewide

(continued)

	Statewide-Percentage of Regular Program								
	May-June 1977	Sept.-Oct. 1977	Dec.-Jan. 1978	May-June 1978	Aug.-Sept. 1978	Oct.-Dec. 1978	March 1979	June 1979	December 1979
Occupation									
Professional, Technical, Managerial	14.1	16.7	12.9	17.2	19.9	21.0	13.1	18.0	19.3
Clerical/Sales	20.8	22.2	16.8	21.0	19.6	23.3	14.3	20.8	22.0
Services	10.5	11.8	10.5	10.3	12.3	11.7	9.3	11.5	11.2
Farming, Fishing, Forestry	1.5	1.5	3.6	1.8	1.9	1.5	3.7	1.1	1.5
Processing	2.6	2.0	2.2	2.7	2.1	2.0	1.6	2.0	1.6
Machine Trades	8.1	7.6	7.1	7.5	7.0	7.7	5.5	7.6	6.1
Bench Work	9.3	9.5	9.6	8.3	7.6	8.1	7.6	8.8	9.3
Structural	17.7	12.8	21.6	17.6	11.6	12.3	30.2	13.8	13.6
Miscellaneous Work	15.4	15.9	15.6	13.5	17.7	12.3	14.6	16.5	15.4
INA	0.0	0.0	0.1	0.1	0.3	0.1	0.2	0.1	--
Recent Duration									
0 - 9 Weeks	46.7	51.8	63.7	47.1	60.1	53.1	49.5	57.7	55.1
10-19 Weeks	31.4	30.4	23.6	33.2	25.1	31.5	38.2	25.8	30.6
20 - 29 Weeks	15.9	15.0	10.8	17.0	13.0	14.7	11.3	15.2	13.4
30+ Weeks	2.0	2.2	1.5	2.6	1.4	0.7	1.0	1.3	1.0
INA	4.0	0.6	0.4	0.1	0.4	0.0	0.0	0.0	0.0
Industry Attachment									
Manufacturing	29.6	28.4	29.7	26.6	22.7	25.7	21.7	27.2	26.7
Contract Construction	14.2	9.2	18.6	12.7	6.5	8.0	25.3	9.5	8.1
Transp., Utilities	3.8	6.1	4.0	4.4	8.2	4.1	3.9	6.2	6.5

Table 24 Selected Characteristics of Insured Unemployed Statewide

(continued)

	Statewide-Percentage of Regular Program								
	May-June 1977	Sept.-Oct. 1977	Dec.-Jan. 1978	May-June 1978	Aug.-Sept. 1978	Oct.-Dec. 1978	March 1979	June 1979	December 1979
Industry Attachment (continued)									
Wholesale, Retail Trade..........	22.0	23.6	19.7	21.9	19.3	21.0	18.2	22.7	21.4
Finance, Insurance, Real Estate..	3.2	3.6	2.9	3.5	2.9	3.6	2.4	2.7	2.6
Services.........................	14.3	17.2	14.4	15.4	16.5	19.3	12.2	16.4	18.8
Governments......................	4.8	7.0	5.0	10.5	19.7	13.4	11.8	12.9	14.3
Others...........................	1.1	1.3	3.2	1.4	1.4	1.2	3.4	1.1	1.2
INA..............................	7.0	3.3	2.5	3.6	2.8	3.7	1.1	1.3	0.4
Average Weekly Wage									
Under $100.......................	21.4	22.4	19.2	17.5	20.6	15.3	13.5	17.5	16.4
$100 - $149......................	23.2	22.7	22.2	22.4	22.3	21.2	20.3	21.3	21.5
150 - 199........................	18.8	19.8	19.3	21.0	20.6	22.5	22.3	22.5	22.4
200 - 249........................	12.7	12.7	13.9	13.5	11.2	14.8	14.0	13.3	14.2
250 - 299........................	8.4	7.7	8.8	8.9	6.8	9.0	10.3	8.1	9.0
300 or more......................	12.5	12.2	12.8	13.8	11.3	14.7	18.3	14.8	15.7
INA..............................	3.0	2.5	3.8	2.9	7.2	2.5	1.3	2.6	0.9
Separation Reason									
Layoff..........................	85.8	85.7	92.1	82.6	86.8	80.3	89.3	85.3	85.5
Quit Vol. Ret...................	0.6	0.4	0.2	0.6	0.6	0.5	0.4	0.9	0.1
Quit Pregnancy..................	0.1	0.0	0.0	0.2	0.1	0.2	0.0	0.0	0.1
Quit Other......................	3.0	3.4	1.6	3.7	2.5	3.9	2.1	2.8	3.0
Discharges......................	8.1	8.1	4.6	9.6	8.3	7.7	4.3	6.6	7.4
Labor Dispute...................	0.3	0.2	0.1	0.3	2.2	0.3	0.1	0.3	0.1
Other/INA.......................	2.1	2.2	1.4	3.0	0.5	7.1	3.8	4.1	3.9

Table 25 Massachusetts Regular Total Benefit Payments*
March 1980-March 1979-March 1978

Item	March 1980			March 1979			March 1978		
	Percent of Total Payments			Percent of Total Payments			Percent of Total Payments		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Manufacturing	25.7	21.0	37.8	26.1	19.9	41.1	22.3	17.4	34.8
Durable Goods-Total	10.9	11.0	10.5	11.0	10.6	12.0	8.9	8.7	9.5
Lumber & Wood	0.5	0.5	0.6	0.4	0.4	0.2	0.3	0.4	0.3
Furniture & Fixtures	0.4	0.4	0.5	0.5	0.5	0.7	0.5	0.5	0.5
Stone, Clay & Glass	1.0	1.2	0.3	1.0	1.3	0.3	1.3	1.6	0.5
Primary Metals	0.5	0.6	0.3	0.5	0.5	0.4	0.5	0.5	0.3
Fabricated Metals	2.2	2.2	2.2	2.5	2.7	1.8	2.0	2.0	1.9
Machinery (exc. Elec.)	1.9	2.1	1.5	1.4	1.4	1.4	1.5	1.6	1.2
Electrical Machinery	1.6	1.2	2.8	2.7	2.0	4.4	1.6	1.1	3.0
Transportation Equip	1.5	2.0	0.2	0.8	1.1	0.2	0.4	0.6	0.1
Instruments	1.2	0.8	2.2	1.2	0.7	2.6	0.9	0.6	1.8
Nondurable Goods - Total	14.9	9.9	27.3	15.1	9.4	28.8	13.4	8.7	25.4
Food & Kindred Prod	1.5	1.3	2.1	1.5	1.1	2.3	1.5	1.2	2.4
Textile Mills	1.3	1.1	1.9	1.8	1.3	3.0	1.3	1.0	2.1
Apparel	3.4	0.9	9.7	3.9	1.0	10.3	3.3	1.0	9.1
Paper & Allied Prod	1.0	0.8	1.4	1.0	0.8	1.3	0.9	0.7	1.1
Printing & Publishing	1.3	1.0	2.0	1.4	1.0	2.4	1.6	1.1	3.1
Chemical Products & Petroleum Refining	1.0	1.3	0.4	0.9	1.1	0.4	1.1	1.2	1.0
Rubber & Plastics Prod	1.8	1.4	3.0	1.1	0.9	1.7	1.5	1.2	2.2
Leather & Leather Prod	1.8	1.3	3.0	2.3	1.4	4.5	1.2	0.7	2.5
Miscellaneous Manufact	1.8	1.0	3.8	1.4	0.8	2.9	0.9	0.6	1.9

Table 25 Massachusetts Regular Total Benefit Payments*
March 1980-March 1979-March 1978

(continued)

Item	March 1980			March 1979			March 1978		
	Percent of Total Payments			Percent of Total Payments			Percent of Total Payments		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Nonmanufacturing..............	74.3	79.0	62.2	73.9	79.9	58.9	77.8	82.6	65.3
Construction................	25.9	35.3	2.3	28.0	38.5	2.3	27.3	36.9	2.5
Transportation and Public Utilities............	4.1	4.7	2.7	4.2	4.9	2.5	3.9	4.4	2.7
Wholesale & Retail Trade....	19.6	16.3	28.0	20.5	17.2	28.6	19.4	16.5	27.1
Finance, Insurance and Real Estate................	2.4	1.8	3.9	2.7	2.0	4.4	3.0	2.2	5.0
Services....................	13.0	10.0	20.3	11.8	9.5	17.4	12.6	10.0	19.3
Mining & Agriculture........	4.1	5.3	0.9	3.9	5.1	0.7	3.4	4.5	0.6
Other.......................	5.1	5.5	4.1	2.8	2.7	3.0	8.2	8.2	8.1

* Payments made under State Regular UI program only.

Due to rounding, percentages may not add to subtotals or totals.

VII. Hours and Earnings/Labor Turnover

The series on the hours worked and earnings paid Massachusetts production workers is being revised. Therefore, we are unable to publish data for 1979 or early 1980. Tables 26 through 28 contain data for the years 1970-1978. Although we don't have concrete data to work with there are still some general assumptions about activity in 1979 that can be made.

Average weekly earnings of production workers in the state averaged between $240-$250 in 1979, and will increase a minimum of 7-8 percent during 1980. In 1978 production workers in Massachusetts had an average weekly pay only ninety percent as great as production workers nationwide. Workers here were on the job slightly less than their national counterparts. These relationships also held true in 1979.

As we move into recession, we can expect average hours to decline, although probably not as much in Massachusetts as nationally. This is because we believe the recession will be milder here than elsewhere. Additionally, hourly wages will continue to increase, although perhaps at a reduced rate. Employees who are paid on "piece work" will be hurt by the decrease in demand.

Labor turnover figures illustrate the economic slowdown in the state and nationwide. Electrical and nonelectrical machinery and instruments grew in 1979, although instruments in the latter part of 1979 had more layoffs than accessions. Among nondurables, paper and publishing had a higher rate of accessions than separations. Leather products fared poorly locally and showed net losses, while nationally it was gaining.

During the recession both new hires and voluntary quits will decline. Separations will be as much as fifty percent greater than accessions, with most the result of layoffs.

Table 26 -Average Weekly Earnings

	1970	1971	1972	1973	1974	1975	1976	1977	1978	U.S. 1978	U. S. to Mass. Difference (%)
Manufacturing	$126.62	$134.75	$146.37	$157.55	$165.98	$175.17	$190.16	$204.69	$222.71	$249.27	+11.9%
Durable Goods	137.08	145.93	159.08	172.22	182.52	191.52	206.15	222.36	240.72	270.44	+12.4
Ordnance	131.40	161.51	-	-	-	-	-	-	-	-	-
Lumber & Wood	114.73	119.25	129.87	132.99	134.61	138.62	151.32	161.95	176.73	223.28	+26.3
Furniture & Fixtures	106.09	112.32	122.53	131.66	139.29	150.51	155.52	165.50	180.42	183.92	+ 1.9
Stone, Clay, & Glass	150.15	160.32	180.84	195.99	203.01	197.85	224.19	243.20	272.41	262.91	- 3.5
Primary Metals	144.99	151.37	166.49	174.90	190.08	199.50	220.80	237.83	248.78	342.76	+37.8
Fabricated Metals	136.04	144.79	158.25	172.00	185.15	195.09	205.75	222.89	241.36	259.94	+ 7.7
Machinery (Ex. Elec.)	150.18	159.17	173.47	186.54	198.34	205.64	214.87	227.81	249.23	283.92	+13.9
Electrical Machinery	124.89	138.80	145.56	154.37	164.01	174.05	184.71	200.94	216.15	234.95	+ 8.7
Transportation Equipment	154.77	165.59	179.86	192.78	196.09	201.84	219.64	253.44	264.60	333.01	+25.9
Instruments	137.97	145.89	154.16	178.50	192.70	203.41	231.68	244.18	265.85	233.13	-12.3
Nondurable Goods	117.20	125.39	135.19	143.81	149.77	158.95	173.11	185.55	201.33	217.88	+ 8.2
Food	128.80	135.72	147.86	153.27	161.28	183.77	195.71	209.48	225.92	230.84	+ 2.2
Textiles	110.02	116.64	129.27	137.28	141.40	153.34	163.15	177.23	189.32	173.32	- 8.5
Apparel	84.81	90.85	98.26	105.14	107.88	115.60	125.51	134.41	149.80	140.26	- 6.4
Paper	136.85	145.61	159.87	170.77	178.45	186.04	204.16	222.31	247.72	279.71	+12.9
Printing	143.63	157.03	169.86	177.93	183.33	190.99	206.09	221.41	234.84	243.27	+ 3.6
Chemicals	157.25	168.45	177.21	192.85	201.48	216.32	240.10	262.18	280.11	293.72	+ 4.9
Rubber	127.72	137.76	146.97	154.95	163.21	172.06	190.70	204.09	217.62	224.40	+ 3.1
Leather	98.09	103.04	108.25	113.83	118.30	125.94	131.76	136.10	145.67	144.69	- 0.7
Miscellaneous	115.31	122.10	129.51	134.15	138.65	147.38	162.01	174.28	189.94	181.97	- 4.2

Source: Occupation/Industry Research Department

Table 27 Average Weekly Hours

	1970	1971	1972	1973	1974	1975	1976	1977	1978	U.S. 1978	U. S. to Mass. Difference (Hours)
Manufacturing	39.2	39.4	40.1	40.5	39.9	39.1	39.7	39.9	40.2	40.4	+0.2
Durable Goods	40.2	40.2	41.0	41.6	41.2	39.9	40.5	40.8	40.8	41.1	+0.3
Ordnance	42.8	42.7	-	-	-	-	-	-	-	-	-
Lumber & Wood	38.5	38.1	39.0	39.0	37.6	36.1	39.0	39.5	39.1	39.8	+0.7
Furniture & Fixturers	38.3	39.0	39.4	39.3	38.8	38.2	38.4	38.4	38.8	39.3	+0.5
Stone, Clay, and Glass	38.9	39.1	41.1	41.7	40.2	37.4	39.4	40.0	41.4	41.6	+0.2
Primary Metals	40.5	40.8	42.8	43.4	43.2	42.0	42.3	43.4	43.8	41.8	-2.0
Fabricated Metals	41.1	40.9	42.2	43.0	41.7	40.9	41.4	41.2	41.4	41.0	-0.4
Machinery (Ex. Elec.)	40.7	40.5	41.6	42.3	42.2	40.4	41.4	41.8	42.1	42.0	-0.1
Electrical Machinery	39.9	40.0	40.1	40.2	40.1	39.2	39.3	39.4	39.3	40.3	+1.0
Transportation Equipment	38.5	38.6	39.1	40.5	40.1	38.3	38.4	39.6	37.8	42.1	+4.3
Instruments	40.7	40.3	41.0	42.1	41.8	41.6	42.2	42.1	42.4	40.9	-1.5
Nondurable Goods	38.3	38.7	39.3	39.4	38.6	38.3	38.9	38.9	39.4	39.4	-
Food	40.0	39.8	40.4	39.2	38.4	39.1	39.3	39.6	40.2	39.8	-0.4
Textiles	40.3	40.5	41.7	41.6	40.4	41.0	41.2	41.8	41.7	40.4	-1.3
Apparel	33.0	33.9	34.6	34.7	33.4	33.8	34.2	34.2	35.0	35.6	+0.6
Paper	42.5	42.7	43.8	43.9	43.0	41.9	42.8	43.0	44.0	42.9	-1.1
Printing	37.5	37.3	38.0	38.1	37.8	36.8	37.0	37.4	38.0	37.6	-0.4
Chemicals	41.6	41.8	41.5	42.2	41.8	41.6	42.8	42.7	42.7	41.9	-0.8
Rubber	41.2	41.0	41.4	41.1	40.6	40.2	41.1	40.9	40.6	40.8	+0.2
Leather	35.8	36.8	37.2	37.2	36.4	36.4	36.6	36.1	36.6	37.1	+0.5
Miscellaneous	39.9	40.3	40.6	40.9	39.5	39.3	40.3	39.7	40.5	38.8	-1.7

Source: Occupation/ Industry Research Department

Table 28 Average Hourly Earnings

	1970	1971	1972	1973	1974	1975	1976	1977	1978	U.S. 1978	U. S. to Mass. Difference (Hours)
Manufacturing	$3.23	$3.42	$3.65	$3.89	$4.16	$4.48	$4.79	$5.13	$5.54	$6.17	+11.4%
Durable Goods	3.41	3.63	3.88	4.14	4.43	4.80	5.09	5.45	5.90	6.58	+11.5
Ordnance	3.07	3.78	-	-	-	-	-	-	-	-	-
Lumber & Wood	2.98	3.13	3.33	3.41	3.58	3.84	3.88	4.10	4.52	5.61	+24.1
Furniture & Fixtures	2.74	2.88	3.11	3.35	3.59	3.94	4.05	4.31	4.65	4.68	+ 0.7
Stone, Clay and Glass	3.86	4.10	4.40	4.70	5.05	5.29	5.69	6.08	6.58	6.32	- 4.0
Primary Metals	3.58	3.71	3.89	4.03	4.40	4.75	5.22	5.48	5.68	8.20	+44.4
Fabricated Metals	3.31	3.54	3.75	4.00	4.44	4.77	4.97	5.41	5.83	6.34	+ 8.8
Machinery (Ex. Elec.)	3.69	3.93	4.17	4.41	4.70	5.09	5.19	5.45	5.92	6.76	+14.2
Electrical Machinery	3.13	3.47	3.63	3.84	4.09	4.44	4.70	5.10	5.50	5.83	+ 6.0
Transportation Equipment	4.02	4.29	4.60	4.76	4.89	5.27	5.72	6.40	7.00	7.91	+13.0
Instruments	3.39	3.62	3.76	4.24	4.61	5.01	5.49	5.80	6.27	5.70	- 9.1
Nondurable Goods	3.06	3.24	3.44	3.65	3.88	4.15	4.45	4.77	5.11	5.53	+ 8.2
Food	3.22	3.41	3.66	3.91	4.20	4.70	4.98	5.29	5.62	5.80	+ 3.2
Textiles	2.73	2.88	3.10	3.30	3.50	3.74	3.96	4.24	4.54	4.29	- 5.5
Apparel	2.57	2.68	2.84	3.03	3.23	3.42	3.67	3.93	4.28	3.94	- 7.9
Paper	3.22	3.41	3.65	3.89	4.15	4.44	4.77	5.17	5.63	6.52	+15.8
Printing	3.83	4.21	4.47	4.67	4.85	5.19	5.57	5.92	6.18	6.47	+ 4.7
Chemicals	3.78	4.03	4.27	4.57	4.82	5.20	5.61	6.14	6.56	7.01	+ 6.9
Rubber	3.10	3.36	3.55	3.77	4.02	4.28	4.64	4.99	5.36	5.50	+ 2.6
Leather	2.74	2.80	2.91	3.06	3.25	3.46	3.60	3.77	3.98	3.90	- 2.0
Miscellaneous	2.89	3.03	3.19	3.28	3.51	3.75	4.02	4.39	4.69	4.69	-

Source: Occupation/Industry Research Department

Table 29 Massachusetts Accession Rates
1979

Item	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Annual Average	1979 U. S. Annual Average
TOTAL MANUFACTURING	3.9	3.0	3.4	3.5	4.5	4.4	3.5	4.5	4.7	4.0	3.0	2.9	3.8	3.9
Durable Goods	3.3	2.5	3.0	3.1	3.4	3.7	2.4	3.3	3.6	3.2	2.5	2.6	3.1	3.6
Lumber & Wood Products	12.0	5.4	8.1	6.2	7.7	5.5	5.4	4.6	10.7	4.0	4.3	2.2	6.3	5.5
Furniture & Fixtures	5.0	3.8	4.4	4.3	5.8	10.3	7.0	4.1	6.2	5.7	3.4	7.1	5.6	5.1
Stone, Clay, & Glass	1.8	1.9	2.8	3.6	5.8	3.5	1.3	2.3	1.9	1.5	1.2	1.0	2.4	4.1
Primary Metal Products	3.0	2.4	2.3	3.0	2.7	3.3	2.8	3.1	3.6	3.1	2.6	1.3	2.8	2.6
Fabricated Metal Products	3.3	2.7	3.2	3.4	4.0	4.3	3.2	3.6	3.9	3.9	3.2	2.4	3.4	4.0
Machinery exc. Electrical	3.5	1.8	2.9	2.9	2.5	2.9	2.1	3.6	3.2	3.2	2.4	4.3	2.9	2.9
Electrical Machinery	3.6	3.0	3.0	2.9	3.8	3.7	2.4	3.5	4.1	3.7	2.8	2.5	3.3	3.4
Transportation Equipment	1.8	1.5	2.3	3.3	2.3	3.4	1.8	2.2	2.5	1.7	1.7	1.5	2.2	3.4
Instruments & Related Products	2.8	2.9	2.8	2.5	3.3	3.7	1.5	2.9	3.0	2.8	1.7	1.3	2.6	2.9
Nondurable Goods	4.7	3.6	3.9	4.1	5.9	5.4	5.2	6.1	6.2	5.1	3.7	3.2	4.8	4.5
Food & Kindred Products	5.9	3.5	4.2	4.3	8.6	6.4	8.4	5.5	4.9	4.4	3.3	3.2	5.2	6.6
Textile Mill Products	7.0	4.7	4.9	6.0	5.8	5.5	4.7	11.0	6.4	5.9	4.8	4.9	6.0	4.6
Apparel & Other Textile Products	5.0	3.7	4.5	5.0	5.2	4.2	5.3	6.1	5.0	4.7	3.7	3.4	4.7	5.5
Paper & Allied Products	2.6	2.6	2.4	2.4	3.6	4.1	2.4	3.3	3.4	3.6	2.6	2.4	3.0	2.8
Printing & Publishing	3.6	2.9	3.2	3.1	6.0	5.0	3.4	3.7	5.4	4.5	2.9	2.9	3.9	3.6
Chemicals & Allied Products	2.0	1.5	1.2	1.8	2.9	3.4	2.5	4.2	2.6	1.8	0.8	0.8	2.1	1.8
Rubber & Plastics n.e.c.	5.4	4.8	4.9	4.6	5.8	6.4	5.4	5.8	6.5	6.0	5.6	4.2	5.5	4.8
Leather & Leather Products	6.9	5.3	5.3	5.5	7.7	7.3	9.7	9.2	12.0	10.5	6.6	4.1	7.5	6.9
Miscellaneous Nondurable Goods	3.7	3.2	3.8	3.6	7.0	6.7	6.5	7.3	10.5	5.0	3.0	2.3	5.2	5.4

Source: Occupation/Industry Research Department

Table 30 Massachusetts Separation Rates
1979

Item	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1979 Annual Average	1979 U. S. Annual Average
TOTAL MANUFACTURING	3.5	3.0	3.2	3.2	3.5	3.8	4.4	5.1	4.4	3.5	3.5	3.3	3.7	4.0
Durable Goods	2.7	2.4	2.5	2.6	2.8	2.6	2.8	4.1	3.1	2.4	2.4	2.1	2.7	3.6
Lumber & Wood Products	6.5	5.1	4.8	4.9	7.3	4.8	8.2	10.2	7.1	6.2	3.3	4.0	6.0	6.1
Furniture & Fixtures	5.1	3.4	5.1	4.9	6.1	8.3	6.4	4.0	5.2	4.5	3.7	7.5	5.4	5.3
Stone, Clay & Glass	2.1	2.8	1.5	1.7	3.2	1.5	2.2	4.7	2.5	1.3	1.7	1.1	2.2	4.2
Primary Metal Products	2.2	2.1	3.8	2.6	2.1	2.4	2.8	3.8	2.8	2.3	2.6	2.2	2.6	2.9
Fabricated Metal Products	3.3	2.7	3.1	3.0	3.7	3.1	3.9	4.9	3.4	3.1	3.2	2.6	3.3	4.1
Machinery exc. Electrical	2.1	1.5	1.9	2.6	1.8	2.3	3.0	3.3	2.8	2.0	1.6	1.4	2.2	2.6
Electrical Machinery	2.8	3.1	2.8	2.4	3.3	2.7	2.8	4.0	3.3	2.4	2.3	1.8	2.8	3.2
Transportation Equipment	2.0	1.9	1.6	2.7	1.9	2.0	1.5	2.6	2.7	2.3	3.6	3.9	2.4	3.5
Instruments & Related Products	2.9	2.0	2.5	2.2	2.3	2.1	1.6	5.1	2.9	2.0	2.1	1.5	2.4	2.6
Nondurable Goods	4.6	3.8	4.2	4.0	4.6	5.6	6.6	6.4	6.2	5.1	5.0	5.0	5.1	4.6
Food & Kindred Products	4.9	3.6	4.2	3.7	7.3	12.3	9.5	6.0	5.1	4.8	6.1	9.7	6.4	6.5
Textile Mill Products	5.3	5.6	5.0	5.5	5.4	5.4	12.4	8.2	8.3	5.7	5.3	3.3	6.3	4.8
Apparel & Other Textile Products	4.4	3.6	5.1	4.5	3.5	5.3	6.8	6.0	6.2	6.0	6.2	5.0	5.2	6.0
Paper & Allied Products	3.0	2.1	2.6	2.3	2.5	2.4	2.2	4.9	3.4	3.4	2.6	2.2	2.8	2.9
Printing & Publishing	3.7	2.5	3.3	3.0	3.7	3.9	3.1	5.8	4.3	3.5	3.6	3.9	3.7	3.4
Chemicals & Allied Products	1.6	1.8	1.4	1.7	1.2	1.1	1.5	4.4	3.4	3.3	2.1	1.0	2.0	1.7
Rubber & Plastics n.e.c.	5.6	4.8	4.5	5.3	5.1	5.2	7.2	7.9	6.7	6.1	6.0	4.7	5.8	5.2
Leather & Leather Products	7.7	5.7	6.6	6.1	8.7	10.0	12.4	8.7	13.4	9.9	8.7	9.2	8.9	7.6
Miscellaneous Nondurable Goods	4.9	4.4	4.9	4.1	4.3	5.3	6.2	6.4	6.8	4.3	4.6	6.2	5.2	5.8

Source: Occupation/Industry Research Department

VIII. Labor Supply/Demand Imbalances

The Employment Service Automated Reporting System (ESARS) reported 109,855 active applicants and 32,302 unfilled openings on file in all Massachusetts Job Matching Service Offices as of December 1979.

By comparing the number of active aplicants with the number of unfilled openings, we find that for every one job left unfilled there were 3.4 applicants still looking for employment at the end of December 1979.

A comparison of active applicants with unfilled job openings by occupation (Table 32) is useful in analyzing the occupational demand and supply in Massachusetts. The ratios have been calculated to aid educational and training planners as to which occupational categories for which there are occupational demands. An occupational ratio greater than 3 to 1 should be considered as an occupation with a surplus of applicants, while an occupational ratio consistently below 3 to 1 should indicate the occupations for which employers are having difficulty obtaining workers. The table should be reviewed with an understanding of the limitations in the data sources. The Job Bank openings only refer to jobs that are listed with Division of Employment Security, therefore, a substantial number of job openings are never received by the Massachusetts Job Bank. Many of Massachusetts' employers advertise their openings in newspapers or recruit through schools and private employment agencies, especially in the highly professional and technical fields. Even though the data are subject to limitations, a considerable amount of information is available on the supply/demand of certain occupations.

A comparison of job openings and average wage by occupation for all the participating Massachusetts Job Banks is listed on Tables 33 and 34. The information listed for April 1980, concludes that most job opportunities can be found in the Boston SMSA, which also reports paying a higher salary than the other Job Bank areas within the state for the same occupation.

There are many reasons for "shortages" in various occupations. The popular consensus is that there is a lack of qualified applicants for the specific skills needed by many employers. While it would be unwise to make any hard and fast rules, generally the reasons job orders placed with the Employment Service go unfilled are because of noncompetitive wages, unsuitable working conditions or hours, inconvenient locations, transportation problems, and/or the workers don't possess the required skills for the job.

Table 31 ANALYSIS OF APPLICANT POPULATION AS OF SEPTEMBER 30,1979

25 MASSACHUSETTS
COUNTY: TOTAL ALL COUNTIES

ALL APPLICANTS

	************TOTAL APPLICANTS					************	*****DISADVANTAGED APPLICANTS				********	**VETERAN APPLICANTS**		
CATEGORY	TOTAL	UNEM-PLOYED	EMPLYED PRT/TME	YOUTH 16-21	HANDICP	PUBLIC ASSIST	TOTAL	UNEM-PLOYED	EMPLYED PRT/TME	EMPLYED FUL/TME	YOUTH 16-21	TOTAL	DISABLD	VIETNAM
AGE/SEX,TOTAL	393,145	311,956	15,261	97,251	20,015	76,285	148,126	128,085	6,162	5,910	27,532	51,589	4,857	15,611
MALE,TOTAL	196,610	152,941	5,216	53,176	13,900	19,058	58,034	51,049	1,106	1,161	14,715	49,508	4,719	15,171
14-15	3,526	3,125	93	0	19	208	1,752	1,706	11	2	0	6	2	3
16-17	10,884	8,559	352	10,884	89	961	4,285	3,877	60	31	4,285	24	1	5
18	9,135	6,490	558	9,135	135	649	2,668	2,270	84	51	2,668	57	4	5
19	11,540	8,392	466	11,540	175	549	2,917	2,508	91	57	2,917	307	8	3
20-21	21,617	15,810	626	21,617	566	1,081	4,845	4,080	113	100	4,845	1,868	63	105
22-24	30,666	23,359	830	0	1,224	1,871	7,030	6,055	141	175	0	6,052	260	2,353
25-44	81,895	64,590	1,803	0	6,720	10,447	26,275	23,067	498	613	0	25,579	2,152	12,021
45-54	15,397	12,673	243	0	2,634	2,311	5,375	4,849	66	84	0	9,054	1,033	532
55-64	9,498	7,810	160	0	2,041	870	2,444	2,244	33	41	0	5,886	1,058	126
65/OVER	2,452	2,103	85	0	297	111	443	413	9	6	0	675	138	13
FEMALE,TOTAL	196,535	159,015	10,045	44,075	6,115	57,227	90,092	77,036	5,056	4,749	12,817	2,081	138	440
14-15	2,635	2,370	58	0	12	156	1,393	1,366	8	0	0	0	0	0
16-17	9,946	8,036	383	9,946	60	796	3,737	3,439	58	23	3,737	4	2	1
18	8,478	6,089	699	8,478	75	645	2,518	2,176	103	39	2,518	14	9	6
19	9,517	6,917	579	9,517	93	592	2,502	2,146	116	43	2,502	29	3	2
20-21	16,134	11,974	792	16,134	237	1,365	4,060	3,485	154	108	4,060	122	4	6
22-24	21,124	16,646	955	0	349	2,840	5,917	5,166	218	204	0	364	18	101
25-44	93,408	76,777	5,237	0	3,092	39,978	53,989	45,126	3,685	3,593	0	1,013	62	306
45-54	22,592	19,163	981	0	1,288	8,490	11,805	10,297	589	636	0	252	13	17
55-64	10,955	9,507	320	0	838	2,166	3,706	3,398	111	97	0	267	25	0
65/OVER	1,746	1,536	41	0	71	199	465	437	14	6	0	16	2	1
RACE/SEX,TOTAL	393,039	311,907	15,258	97,246	20,015	76,236	148,072	128,037	6,159	5,910	27,529	51,585	4,856	15,610
MALE,TOTAL	196,600	152,933	5,216	53,172	13,900	19,053	58,028	51,043	1,106	1,162	14,713	49,505	4,719	15,170
WHITE	170,789	132,822	4,796	45,942	12,733	14,637	46,622	40,778	952	993	11,631	45,847	4,425	13,942
BLACK	14,246	10,733	278	4,284	735	2,063	5,842	5,186	96	96	1,630	2,833	237	947
HISPANIC	10,059	8,160	116	2,595	385	2,187	5,111	4,666	50	65	1,340	669	47	226
AMER/INDIAN	185	140	6	26	17	25	74	58	4	4	13	60	4	26
ASIAN/PACIFIC	852	669	17	202	23	109	280	264	2	3	70	74	5	22
INA	469	409	3	123	7	32	99	91	2	1	29	22	1	7
FEMALE,TOTAL	196,489	158,974	10,042	44,074	6,115	57,183	90,044	76,994	5,053	4,748	12,816	2,080	137	440
WHITE	165,694	132,955	9,333	37,972	5,267	41,233	68,147	57,011	4,624	3,995	10,057	1,890	112	396
BLACK	19,736	16,320	544	4,038	429	10,412	14,113	12,714	341	572	1,672	137	11	32
HISPANIC	9,355	8,262	111	1,697	381	5,053	7,024	6,595	59	148	966	45	14	11
AMER/INDIAN	190	155	7	37	7	83	123	108	3	6	19	3	0	0
ASIAN/PACIFIC	1,012	832	42	192	25	293	480	422	24	22	67	5	0	1
INA	502	450	5	138	6	99	157	144	2	5	35	0	0	0

Source: March 1978, Current Population Survey, U. S. Department of Labor.
Note: Subtotals may not add due to rounding.

Table 32 Ratio of Active Applicants to Unfilled Job Openings Massachusetts Job Matching Service

	Major Occupational Category Selected Occupational Group	Mar. 1979	June 1979	Sept. 1979	Dec. 1979
00,01	Professional, Technical and Managerial Work				
01	Architecture & Engineering	1.9/1	1.9/1	1.7/1	2.0/1
02	Math., & Physical Sciences	2.6/1	3.0/1	3.4/1	4.4/1
04	Life Sciences	2.7/1	2.7/1	3.6/1	5.0/1
05	Social Sciences	3.9/1	9.5/1	14.9/1	8.8/1
07	Medicine & Health	3.2/1	2.1/1	1.5/1	2.2/1
09	Education	3.3/1	4.7/1	10.4/1	14.8/1
10	Museum, Lib., & Arch. Scie.	1.7/1	2.0/1	5.2/1	4.8/1
11	Law & Jurisprudence	5.5/1	5.4/1	5.6/1	7.1/1
13	Writing	7.4/1	12.9/1	10.1/1	14.4/1
14	Art	11.5/1	10.6/1	26.0/1	26.9/1
15	Entertainment & Recreation	4.9/1	3.8/1	8.0/1	10.4/1
16	Admin. Specializations	6.1/1	6.3/1	7.6/1	10.9/1
18	Managers & Officials, n.e.c.	6.6/1	6.6/1	6.9/1	10.3/1
19	Professional, Technical and Managerial	1.5/1	1.8/1	2.7/1	3.2/1
2	Clerical and Sales Work				
20	Stenography, Typing, Filing, & Rel. Occupations	3.8/1	4.5/1	4.4/1	5.6/1
21	Computing & Account Recording	7.0/1	8.4/1	5.8/1	7.9/1
22	Material & Prod. Recording	4.5/1	5.5/1	4.6/1	5.9/1
23	Inform. & Message Distr.	3.5/1	4.2/1	3.5/1	3.0/1
24	Miscellaneous Clerical	2.8/1	3.2/1	5.2/1	7.7/1
25	Sales Agent, Services	2.5/1	2.3/1	2.3/1	2.8/1
26-7-8	Sales Agent & Salespersons Commodities	7.3/1	6.0/1	4.5/1	4.6/1
29	Merchandising Occupations, Excluding Sales	6.4/1	8.5/1	2.9/1	5.2/1
3	Services				
30	Domestic Service	4.0/1	5.3/1	5.2/1	5.8/1
31	Food & Bev. Prep. & Svc.	5.8/1	5.9/1	3.5/1	5.7/1
32	Lodging & Related Svc.	2.0/1	2.2/1	2.9/1	1.2/1
33	Barbering, Cosmetology, Related Service	30.6/1	27.3/1	24.5/1	41.1/1
34	Amusement & Rec. Svc.	0.7/1	2.0/1	0.8/1	2.9/1
35	Misc. Personal Service	3.8/1	4.4/1	5.3/1	3.8/1
36	Apparel & Furnish. Svc.	5.4/1	4.6/1	3.4/1	5.6/1
37	Protective Service	1.3/1	0.8/1	1.5/1	1.8/1
38	Building & Related Service	2.0/1	2.2/1	1.2/1	1.5/1

Table 32 Ratio of Active Applicants
to
Unfilled Job Openings
Massachusetts Job Matching Service
(continued)

	Major Occupational Category Selected Occupational Group	Mar. 1979	June 1979	Sept. 1979	Dec. 1979
4	Farming, Fishery, Forestry and Related Work				
40	Plant Farming	3.7/1	5.0/1	2.5/1	5.7/1
41	Animal Farming	23.4/1	14.2/1	16.4/1	27.5/1
42	Misc., Farming & Related	16.7/1	10.6/1	42.0/1	39.0/1
44	Fishery & Related	90.0/0	55.0/1	43.0/1	62.0/1
45	Forestry	1.1/1	3.3/1	1.1/1	2.2/1
5	Processing				
50	Processing of Metal	2.8/1	2.4/1	3.2/1	5.8/1
51	Ore Refining & Foundry	6.6/1	6.4/1	3.9/1	3.5/1
52	Processing of Food, Tobacco, Related Prod.	7.0/1	7.2/1	5.1/1	6.9/1
53	Processing of Paper and Related Material	14.3/1	22.5/1	7.7/1	6.7/1
54	Manuf. of Petroleum, Coal, Natural, & Manuf. Gas & Related Products	9.0/1	6.0/1	2.0/1	9.0/1
55	Chemicals, Plastics, Synthetics, Rubber, Paint and Related Products	4.4/1	3.4/1	2.4/1	2.6/1
56	Processing of Wood & Wood Products	11.0/1	12.0/1	6.0/1	4.0/1
57	Stone, Clay, Glass and Related Products	4.8/1	4.7/1	2.1/1	4.0/1
58	Leather, Textiles and Related Products	4.9/1	7.7/1	3.1/1	8.5/1
59	Processing Occup. n.e.c.	2.9/1	3.6/1	1.6/1	2.9/1
6	Machine Trades				
60	Metal Machining	1.5/1	1.7/1	1.8/1	2.0/1
61	Metalworking Occup. n.e.c.	3.9/1	3.5/1	2.8/1	5.0/1
62,63	Mechanics & Machinery Repairers	4.4/1	5.0/1	3.9/1	5.6/1
64	Paperworking	4.3/1	5.7/1	4.0/1	7.7/1
65	Printing	3.0/1	3.4/1	2.2/1	2.9/1
66	Wood Machining	4.6/1	2.5/1	1.8/1	4.1/1
67	Machining Stone, Clay, Glass, & Rel. Materials	14.0/1	8.5/1	1.7/1	1.8/1
68	Textile	2.3/1	2.3/1	2.4/1	3.1/1
69	Machine Trades Occup. n.e.c.	3.7/1	4.1/1	3.4/1	5.4/1

Table 32 Ratio of Active Applicants to Unfilled Job Openings Massachusetts Job Matching Service (continued)

	Major Occupational Category Selected Occupational Group	Mar. 1979	June 1979	Sept. 1979	Dec. 1979
7	Bench Work				
70	Fabrication, Assembley, and Repair of Metal Products, n.e.c.	6.1/1	4.3/1	2.5/1	2.5/1
71	Fabrication & Repair of Scientific & Medical Apparatus & Rel. Prod.	5.9/1	7.6/1	5.6/1	8.2/1
72	Assembly & Repair of Electrical Equipment	2.1/1	2.5/1	2.6/1	2.8/1
73	Fab. & Repair of Prod. Made from Assorted Materials	6.1/1	9.3/1	5.1/1	6.6/1
74	Painting, Decorating and Related Occupations	12.5/1	8.4/1	4.4/1	12.0/1
75	Fabrication & Repair of Plastics, Synthetics, Rubber & Rel. Products	3.8/1	3.8/1	3.9/1	6.4/1
76	Fabr. & Repair of Wood Prod.	3.2/1	2.9/1	1.3/1	2.1/1
77	Fab. & Repair of Sand, Stone, Clay & Glass Products	5.0/1	3.9/1	2.0/1	2.3/1
78	Fab. & Repair of Textile, Leather & Rel. Products	3.7/1	3.6/1	2.7/1	4.3/1
79	Bench Work Occupations n.e.c.	12.1/1	6.3/1	6.2/1	4.2/1
8	Structural Work				
80	Metal Fabricating n.e.c.	4.1/1	3.7/1	3.1/1	3.1/1
81	Welders, Flame Cutters & Related Work	6.9/1	5.3/1	3.4/1	5.4/1
82	Elec. Assembling, Install. and Repairing	4.3/1	4.6/1	2.9/1	2.5/1
84	Painting, Plastering, Waterproofing, Cementing and Related Works	7.3/1	4.1/1	3.5/1	10.6/1
85	Excavating, Grading, Paving and Related Work	18.9/1	9.1/1	6.2/1	25.1/1
86	Construction Occup. n.e.c.	6.0/1	4.1/1	3.1/1	5.1/1
89	Structural Work Occup. n.e.c.	1.9/1	1.6/1	2.1/1	3.5/1

Table 32 Ratio of Active Applicants
to
Unfilled Job Openings
Massachusetts Job Matching Service
(continued)

	Major Occupational Category Selected Occupational Group	Mar. 1979	June 1979	Sept. 1979	Dec. 1979
9	Miscellaneous Work				
90	Motor Freight	2.7/1	2.3/1	2.0/1	2.2/1
91	Transp. Occup. n.e.c.	4.2/1	4.7/1	3.7/1	4.1/1
92	Packaging & Materials Handling	6.5/1	5.9/1	4.0/1	5.6/1
95	Prod. & Distr. of Utilities	1.9/1	1.9/1	2.3/1	2.5/1
96	Amusement, Recr. & Motion Picture Occup. n.e.c.	2.0/1	9.8/1	9.8/1	2.7/1
97	Graphic Art Work	11.5/1	7.7/1	4.2/1	8.9/1

Source: Table 96 ESARS

Table 33 Job Bank Openings
By Occupational Category
April 1980

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Brockton	Balance of State
TOTAL - ALL OCCUPATIONS	15,969	6,239	630	476	887	531	604	213	1,772	1,130	609	2,878
Prof., Tech., Managerial	2,073	1,130	40	37	30	18	67	36	272	113	76	254
Architect & Engineering	429	297	4	6	14	4	13	9	23	7	13	39
Math. & Physical Sci.	160	132	--	--	--	4	2	2	9	2	1	8
Life & Social Sciences	119	45	--	--	2	--	11	--	15	16	4	26
Medicine & Health	207	92	--	9	--	2	1	--	64	10	7	22
Education	126	45	4	--	1	2	4	2	28	9	1	30
Museum, Library	26	10	9	1	1	--	2	--	1	1	--	1
Law, Jurisprudence	18	14	--	--	--	--	1	--	3	--	--	--
Writing	25	16	--	--	--	1	--	1	6	--	--	1
Art	23	5	7	2	--	--	1	--	3	1	1	3
Entertainment	17	7	3	--	2	--	--	--	3	1	--	1
Administrative Spec.	349	246	4	4	3	1	3	13	23	21	1	30
Managers	302	145	4	5	3	3	15	7	30	31	15	44
Misc., Prof., Tech., Mgr.	272	76	5	10	4	1	14	2	64	14	33	49
Clerical Sales	3,470	1,786	76	58	124	87	101	33	363	216	139	487
Steno., Typing, & Rel.	1,601	911	35	16	59	49	26	8	172	73	96	156
Computing Acc't, Recor.	745	321	9	21	26	12	36	9	79	80	19	133
Prod. & Stock Clerk	236	104	6	5	11	9	15	5	12	16	8	45
Information Distr.	191	120	1	2	5	3	3	2	23	5	2	25
Misc. Clerical	159	73	12	2	8	5	--	2	24	5	1	27
Salespersons Services	342	150	7	10	8	8	15	4	38	27	8	67
Miscellaneous Sales	196	107	6	2	7	1	6	3	15	10	5	34

Table 33 Job Bank Openings
By Occupational Category
April 1980

(continued)

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Brockton	Balance of State
Service	3,066	1,164	64	131	116	56	61	29	555	187	71	632
Food & Beverage Prep.	1,033	501	16	15	49	17	21	13	169	53	24	155
Misc. Personal Svc.	1,138	278	11	80	44	19	22	12	272	77	8	315
Protective Services	321	119	24	31	3	4	5	2	21	16	21	75
Building & Related	468	222	13	5	19	10	11	2	90	27	5	64
Domestic Service	106	44	--	--	1	6	2	--	3	14	13	23
Farming, Fishing Forestry	421	99	27	1	9	4	65	6	43	39	19	109
Plant Farming	360	82	27	--	7	4	49	5	38	35	19	94
Animal Farming	26	16	--	1	2	--	1	1	--	4	--	1
Fishing	15	--	--	--	--	--	2	--	--	--	--	13
Forestry	20	1	--	--	--	--	13	--	5	--	--	1
Processing	652	148	10	65	68	22	14	25	31	64	40	165
Ore Refining, Foundry	74	6	--	--	8	6	--	--	12	17	--	25
Food, Tobacco	92	33	2	7	4	--	1	2	--	6	1	36
Paper	15	4	--	--	4	--	--	--	4	--	2	1
Chem., Plas., Synthetics	253	31	5	58	16	7	11	8	9	27	8	73
Stone, Clay, Glass	46	16	--	--	--	--	1	--	--	10	4	15
Leather & Textiles	70	5	3	--	6	9	1	15	6	3	22	--
Processing Occup., n.e.c.	102	53	--	--	30	--	--	--	--	1	3	15

Table33 Job Bank Openings
By Occupational Category
April 1980
(continued)

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Brockton	Balance of State
Machine Trades	1,294	357	23	42	109	67	41	32	168	154	63	238
Metal Machining	361	107	13	5	13	13	5	2	69	56	18	60
Metal Working	202	85	2	--	16	6	13	1	11	13	5	50
Mechanics & Repair	258	93	5	10	18	2	14	11	23	24	10	48
Printing & Paperworking	119	38	2	14	6	6	3	4	10	10	6	20
Stone & Wood Machining	50	5	--	2	--	--	--	--	5	2	1	35
Textiles	166	8	1	6	14	30	4	8	44	39	--	12
Machine Trades, n.e.c.	138	21	--	5	42	10	2	6	6	10	23	13
Benchwork	2,162	679	317	30	216	77	154	12	77	118	91	391
Metal Products	312	44	13	5	--	1	62	--	16	43	24	104
Scientific & Elec. Equip.	873	347	182	4	97	50	15	12	17	10	11	123
Plastics Syn. Rubber	49	13	--	11	3	--	--	--	2	1	2	17
Stone & Wood Prod.	299	148	1	6	10	3	3	--	5	15	13	95
Textile, Leather	593	120	118	4	102	19	73	--	30	48	41	38
Painting & Decorating	36	7	3	--	4	4	1	--	7	1	--	9
Structural	1,156	346	45	53	72	94	43	20	121	112	46	204
Metal Fabrication	158	58	18	6	4	10	7	5	7	5	10	28
Welders	110	16	2	4	6	11	4	9	6	10	12	30
Electrical	170	56	3	2	28	8	11	3	17	12	11	19
Painting	61	23	--	3	4	2	7	--	4	8	--	10
Excavating Grading etc.	11	2	--	--	--	--	--	--	1	1	1	6
Construction n.e.c.	525	167	13	27	21	60	5	2	70	66	5	89
Structural Occup., n.e.c.	121	24	9	11	9	3	9	1	16	10	7	22

Table 33 Job Bank Openings
By Occupational Category
April 1960

(continued)

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Brockton	Balance of State
Miscellaneous	1,675	530	28	59	143	106	58	20	142	127	64	398
Motor Freight	249	90	10	15	9	3	9	3	21	38	8	43
Packing, Material Hand.	1,180	343	18	41	128	88	42	12	88	72	54	294
Prod. Distribution of Utilities	17	10	--	--	--	--	--	--	5	--	--	2
Graphic Art Work	65	18	--	2	4	5	3	2	25	--	--	6
Transportation	163	69	--	1	2	10	4	2	3	17	2	53
Amusement, n.e.c.	1	--	--	--	--	--	--	1	--	--	--	--

Table 34 Average Pay by Occupational Category
Massachusetts Job Banks
April 1980

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Brockton	Balance of State
TOTAL - ALL OCCUPATIONS	$ 8,914	$ 9,736	$ 8,001	$ 7,891	$ 8,265	$ 8,347	$ 7,614	$ 8,489	$ 8,780	$ 8,379	$ 8,282	$ 8,547
Prof., Tech, Managerial*	13,816	15,931	9,432	9,670	12,552	13,447	10,322	11,635	11,432	10,816	11,785	11,664
Architect & Engineering	17,417	19,605	13,121	11,143	12,792	--	12,700	15,500	13,228	16,000	10,240	14,433
Math. & Physical Sci.	18,736	19,670	--	--	--	14,785	13,575	15,480	13,584	16,000	14,664	14,632
Social Sciences	17,068	19,437	--	--	--	--	--	--	7,488	--	14,500	--
Medicine & Health	12,221	12,292	--	9,198	--	16,250	7,281	12,650	13,068	10,124	13,486	11,634
Education	12,452	12,966	12,631	--	10,500	11,481	12,625	12,063	13,126	13,266	11,229	10,956
Museum, Library	10,063	11,958	6,948	6,866	13,415	--	9,626	--	16,000	7,488	--	16,500
Law Jurisprudence	18,014	19,518	--	--	--	--	14,000	--	12,333	--	--	--
Writing	14,894	17,414	--	--	--	12,000	--	7,800	10,323	--	--	12,000
Art	10,792	12.076	13,000	8,840	--	--	7,280	--	11,044	21,000	7,280	13,160
Entertainment	9,861	11,425	10,692	--	6,760	--	--	--	7,800	12,165	--	8,060
Admin. Spec.	13,583	14,568	8,926	8,432	9,967	12,480	9,880	10,411	12,234	11,168	10,751	11,574
Managers	12,922	15,178	12,050	12,480	10,400	11,860	9,709	9,327	11,334	10,479	10.905	11,237
Misc., Prof., Tech., Managerial	9,569	10,595	8,664	8,500	7,280	9,000	10,300	11,600	8,510	9,469	11,166	8,143
Clerical Sales*	8,105	8,342	7,117	7,819	7,799	8,360	7,146	7,891	7,917	7,853	7,521	8,073
Steno., Typing & Rel.	7,977	8,201	7,166	7,810	7,929	7,885	7,421	7,496	7,649	7,710	7,154	8,006
Computing Acc't., Recor.	8,012	8,590	7,136	7,944	7,903	7,505	7,014	7,858	7,488	7,389	7,832	7,735
Prod. & Stock Clerk	8,012	8,057	6,851	7,384	7,242	8,011	7,273	9,256	9,668	8,203	8,372	7,856
Information Distr.	7,740	7,830	8,497	6,448	7,588	7,219	7,356	7,540	7,973	7,419	9,100	7,278
Misc. Clerical	8,825	9,349	6,448	8,424	8,073	8,424	--	8,224	8,212	11,535	6,760	9,011
Salespersons Services	12,064	13,559	9,360	7,280	--	15,600	--	6,448	10,956	9,600	11,700	10,177
Miscellaneous Sales	7,642	7,458	7,293	8,060	7,280	8,320	7,107	8,320	9,289	8,434	8,310	7,281

Table 34 Average Pay by Occupational Category
Massachusetts Job Banks
April 1980
(continued)

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Brockton	Balance of State
Service**	$3.75	$3.78	$3.75	$3.37	$3.50	$3.58	$3.47	$3.31	$3.80	$3.56	$3.41	$3.96
Food & Bev. Prep.	3.63	3.60	3.46	3.67	3.44	3.73	3.73	3.34	3.67	3.52	3.66	3.73
Misc. Pers. Service	4.15	4.22	3.61	3.58	3.29	3.34	3.10	3.60	4.07	3.55	3.79	4.43
Protective Services	3.57	3.62	4.03	3.84	3.22	3.73	3.36	3.15	3.59	3.44	3.19	3.39
Building & Related	3.76	3.83	3.35	3.45	4.03	3.47	3.55	3.18	3.70	3.78	3.17	3.75
Farming, Fishing, Forestry **	3.63	3.90	4.11	5.50	3.49	4.91	3.35	3.60	3.48	3.32	3.56	3.57
Plant Farming	3.64	3.94	4.11	5.50	3.61	--	3.39	3.57	3.52	3.33	3.56	3.53
Animal Farming	3.78	--	--	--	3.10	--	3.45	3.75	--	3.18	--	--
Misc. Agriculture	--	--	--	--	--	--	--	--	--	--	--	--
Fishing	3.68	--	--	--	--	--	3.76	--	--	--	--	3.67
Forestry	3.28	3.76	--	--	--	--	3.10	--	3.22	--	--	5.50
Processing **	4.03	4.25	4.15	3.49	4.62	3.72	3.58	3.87	4.77	3.93	3.57	3.83
Ore Refining, Foundry	5.42	--	--	--	7.93	--	--	--	4.98	5.17	--	3.96
Food, Tobacco	3.98	4.23	3.50	3.25	4.88	--	3.54	4.81	--	4.06	--	3.72
Paper	5.22	5.20	--	--	4.74	--	--	--	6.09	--	4.00	6.25
Petroleum, Coal, Gas	--	--	--	--	--	--	--	--	--	--	--	--
Chem., Plast., Synthetics	3.93	4.17	5.00	3.52	4.53	4.77	3.52	3.88	4.17	3.79	3.76	3.97
Wood & Wood Products	--	--	--	--	--	--	--	--	--	4.00	--	--
Stone, Clay, Glass	3.79	3.61	--	--	--	--	4.05	--	--	--	3.50	3.90
Concrete	--	--	--	--	--	--	--	--	--	--	--	--
Leather & Textiles	3.88	4.99	3.17	--	4.48	4.12	3.74	3.74	4.13	5.13	3.38	--

Table 34 Average Pay by Occupational Category
Massachusetts Job Banks
April 1980
(continued)

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Brockton	Balance of State
Machine Trades**	$ 4.38	$ 4.57	$ 4.69	$ 3.91	$ 4.31	$ 4.06	$ 3.98	$ 3.89	$4.67	$ 4.27	$ 4.28	$ 4.30
Metal Machining	4.87	4.99	5.16	5.13	4.91	4.58	3.41	7.96	5.18	4.37	4.81	4.85
Metal Working	4.03	5.17	4.45	--	3.90	3.96	4.91	3.34	4.41	4.59	3.25	3.60
Mechanics & Repair	4.83	4.47	4.46	4.06	5.61	4.00	--	3.61	4.94	4.77	5.13	5.00
Printing	4.15	4.38	3.25	3.42	4.21	4.43	--	3.69	3.30	3.95	4.32	4.56
Wood Machining	4.05	4.15	--	4.39	--	--	--	--	3.76	3.45	-	4.04
Textiles	3.77	3.80	3.30	3.62	3.66	3.94	4.01	3.22	2.71	3.89	--	3.71
Benchwork**	3.65	3.66	3.72	3.88	3.80	3.69	3.23	3.61	3.64	3.48	3.53	3.70
Metal Products	3.53	3.96	3.10	3.80	--	3.50	3.10	--	4.00	3.57	3.44	3.54
Electrical Equipment	3.70	3.53	3.74	3.50	3.81	3.48	3.41	3.71	3.52	3.85	3.44	4.16
Plastics Syn. Rubber	3.88	3.75	--	4.57	3.70	--	--	--	4.00	3.25	3.35	3.66
Wood Products	3.50	4.09	--	5.00	3.75	3.60	3.15	--	3.25	3.76	3.26	3.38
Textile, Leather	3.54	3.65	3.71	3.20	3.44	3.60	3.29	--	3.21	3.38	3.67	3.73
Structual **	4.83	5.15	4.79	4.53	4.47	4.36	4.34	4.11	4.91	4.94	4.99	4.73
Metal Fabrication	4.57	4.28	5.20	4.00	6.27	4.55	4.09	3.40	4.87	5.10	5.10	4.64
Welders	4.57	4.99	5.06	5.03	5.22	3.40	3.30	3.70	3.52	5.20	5.41	4.64
Electrical	5.25	5.34	4.50	5.13	4.00	5.70	4.84	6.56	6.17	5.93	4.91	5.69
Painting	4.87	5.57	--	4.50	3.81	7.00	4.29	--	5.06	4.30	7.50	4.14
Excavating Grading etc.	6.23	6.75	--	--	--	--	--	--	3.50	5.00	--	6.50
Construction n.e.c.	4.91	5.47	4.10	4.93	3.77	5.64	5.14	3.57	3.87	4.78	5.70	4.68

Table 34 Average Pay by Occupational Category
Massachusetts Job Banks
April 1980

(continued)

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Brockton	Balance of State
Miscellaneous**	$ 3.74	$3.80	$3.35	$ 3.75	$3.75	$3.62	$3.55	$3.67	$3.73	$3.69	$3.53	$3.82
Motor Freight	4.12	4.19	3.62	4.13	3.82	5.00	4.08	4.33	3.98	3.94	4.28	4.25
Packing, Material Handling	3.64	3.62	3 20	3.57	3.70	3.59	3.41	3.59	3.77	3.55	3.43	3.76
Prod. Distribution of Utilities	5.64	6.35	--	--	--	--	--	--	4.52	--	--	4.88
Graphic Art Work	3.81	4.02	--	4.25	5.46	3.70	3.55	3.25	3.30	--	--	4.35

* Average yearly salary

** Average Hourly pay

Source: Job Bank - April 1980

Table 35 THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

JOB OPENINGS RECEIVED AND FILLED, BY MAJOR OCCUPATIONAL CATEGORY

Massachusetts

Cumulative October 1, 1979 to March 31, 1980

OCCUPATIONAL GROUP	OPENINGS 1/			
	RECEIVED		FILLED	
	Number	Percent	Number	Percent
All Occupational Groups	82,037	100.0	55,935	100.0
Professional, Technical, Managerial	15,419	18.8	11,248	20.1
Clerical	17,887	21.8	11,308	20.2
Sales	5,708	7.0	4,345	7.8
Domestic	861	1.0	592	1.1
Other Services	14,998	18.3	10,024	17.9
Farming, Fishing, Forestry	1,420	1.7	1,363	2.4
Processing Occupations	1,796	2.2	1,275	2.3
Machine Trades	4,243	5.2	2,539	4.5
Bench Work	5,815	7.1	3,599	6.4
Structural Work	4,804	5.8	2,917	5.2
Motor Freight Transportation	2,564	3.1	1,720	3.1
Packing, Material Handling	6,212	7.6	4,792	8.6
All Other	310	0.4	213	0.4

Source: ESARS Table A07 Group Report No. MA5-49A

1/ Total Agricultural and Nonagricultural Openings.

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New 8-76

Table 36

THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

CHARACTERISTICS OF APPLICANTS REGISTERED IN EMPLOYMENT SERVICE OFFICES, BY SELECTED GROUPS

Massachusetts
Cumulative October 1, 1979 to March 31, 1980

CHARACTERISTICS OF APPLICANTS	ALL REGISTERED APPLICANTS		SELECTED GROUPS			
	NUMBER	PERCENT	MINORITY	(1)*	VIETNAM ERA VETERAN	WOMEN
Age - All Ages	99,137	100.0	11,232	22,379	13,127	45,931
Under 20 years	18,346	18.5	2,302	4,717	151	8,667
20 - 21	10,051	10.1	1,107	1,743	616	4,130
22 - 24	14,512	14.6	1,515	2,530	1,704	5,864
25 - 29	16,725	16.9	2,045	3,674	1,968	7,212
30 - 39	18,986	19.2	2,530	5,534	3,378	9,334
40 - 44	5,275	5.3	649	1,450	993	2,885
45 - 54	8,413	8.5	758	1,833	2,246	4,603
55 - 64	5,410	5.5	274	737	1,799	2,699
65 & Over	1,419	1.4	52	161	272	537
Sex -						
Men	53,206	53.7	6,139	10,291	12,662	0
Women	45,931	46.3	5,093	12,088	465	45,931
Highest Grade of School Completed						
0 - 7 years	3,451	3.5	1,233	1,553	214	1,477
8 - 11	27,445	27.7	4,699	9,659	2,332	12,196
12	41,071	41.4	3,444	7,676	6,372	19,830
Over 12 years	27,170	27.4	1,856	3,491	4,209	12,428
Handicapped	4,377	4.4	354	1,746	1,877	1,216
Welfare	10,691	10.8	2,509	10,691	524	7,455
Economically Disadvantaged	22,379	22.6	4,955	22,379	2,400	12,088

*1 Economically Disadvantaged

Source: ESARS Table 06 Series Report No. MA5-48

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Table 37 THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

CHARACTERISTICS OF APPLICANTS ENROLLED IN TRAINING, BY SELECTED GROUPS

Massachusetts

Cumulative October 1, 1979 to March 31, 1980

CHARACTERISTICS OF APPLICANTS	ALL APPLICANTS		SELECTED GROUPS			
	No.	%	MINORITY	ECONOMICALLY DIS-ADVANTAGED	VETERAN	WOMEN
Age - All Ages	1311	100.0	258	1063	88	900
Under 20 years	194	14.8	42	149	6	94
20 - 21	109	8.3	28	70	6	55
22 - 24	153	11.7	22	116	17	88
25 - 29	247	18.9	48	210	10	193
30 - 39	402	30.7	82	355	25	319
40 - 44	108	8.2	21	90	10	83
45 - 54	80	6.1	12	62	11	60
55 - 64	15	1.1	3	9	3	8
65 years or older	3	0.2	0	2	0	0
Sex -						
Men	411	31.4	69	256	81	0
Women	900	68.6	189	807	7	900
Highest Grade of School Completed - All Grades						
0 - 7 years	56	4.3	23	50	2	35
8 - 11	564	43.0	138	483	24	368
12	521	39.7	84	423	38	376
Over 12 years	170	13.0	13	107	24	121
Handicapped	79	6.0	4	62	12	45
Welfare	838	63.9	179	837	20	700
Economically Disadvantaged	1063	81.1	222	1063	39	807

Source ESARS Table 04 series Report No. MA 5-46

IX. Individuals in Need of Employment Service

Individuals with low skill and educational levels are the most in need of manpower services. During periods of an economic recession many skilled and educated people also need manpower services. Skilled and educated workers are presumed to be able to find work on their own once the economic slowdown improves but the unskilled and under-educated will probably always need some form of assistance.

For many federally funded work force training programs, assistance is allocated to individuals on an income status basis. Poverty income levels and lower living standard income levels are established by the U. S. Department of Labor.

The Employment and Training Administration defines an economically disadvantaged person as someone who is a member of a family that 1) receives cash welfare payments; or 2) has a family income that, in relation to the family size and location, represents seventy percent of the lower living income levels issued by the department's Bureau of Labor Statistics, or poverty levels established by the Office of Management and Budget.

Table 38 1980 Poverty Income Guidelines

Size of Family Unit	One	Two	Three	Four	Five	Six
Nonfarm Family	$3,790	$5,010	$6,230	$7,450	$8,670	$9,890
Farm Family	3,250	4,280	5,310	6,340	7,370	8,400

For family units with more than six members,add $1,220 for each additional member in a nonfarm family, add $1,030 for each additonal member in a farm family.

Table 39 Lower Living Standard Income Levels

Prime Sponsor (Metro)	Family Size					
	One	Two	Three	Four	Five	Six*
Boston City	$4,900	$8,040	$11,030	$13,620	$16,070	$18,800
EMHRDA Consortium	4,900	8,040	11,030	13,620	16,070	18,800
New Bedford Consortium	4,640	7,600	10,430	12,880	15,200	17,770
Hampden County Consortium	4,640	7,600	10,430	12,880	15,200	17,770
Worcester Consortium	4,640	7,600	10,430	12,880	15,200	17,770
Lowell Consortium	4,900	8,040	11,030	13,620	16,070	18,800
Brockton Consortium	4,900	8,040	11,030	13,620	16,070	18,800
Fall River Consortium	4,640	7,600	10,430	12,880	15,200	17,770
Balance of State	4,470	7,330	10,060	12,420	14,660	17,140
Boston SMSA**	4,900	8,040	11,030	13,620	16,070	18,800

Table 40 70 Percent Lower Living Standard Income Levels

Prime Sponsor (Metro)	Family Size					
	One	Two	Three	Four	Five	Six*
Boston City	$3,430	$5,620	$7,720	$9,530	$11,250	$13,150
EMHRDA Consortium	3,430	5,620	7,720	9,530	11,250	13,150
New Bedford Consortium	3,250	5,320	7,310	9,020	10,640	12,450
Hampden County Consortium	3,250	5,320	7,310	9,020	10,640	12,450
Worcester Consortium	3,250	5,320	7,310	9,020	10,640	12,450
Lowell Consortium	3,430	5,620	7,720	9,530	11,250	13,150
Brockton Consortium	3,430	5,620	7,720	9,530	11,250	13,150
Fall River Consortium	3,250	5,320	7,310	9,020	11,640	12,450
Balance of State	3,250	5,320	7,310	9,020	10,640	12,450
Boston SMSA**	3,430	5,620	7,720	9,530	11,250	13,150

* For families larger than six persons, an amount equal to the difference between the six and five person eligibility levels should be added to the six person eligibility income level for each additional person in a family.

** For families designated in the Balance of State Prime Sponsor but residing in the Boston SMSA.

Table 41 Population and Labor Force
Composition Projections
Fiscal Year 1981
Massachusetts

	Population	Labor Force	Employ- ment	Unemploy- ment	Unemploy- ment Rate	Labor Force Participation Rate
TOTAL.......	5,802,252	2,966,572	2,747,048	219,524	7.4	66.6
White Male.....	2,585,438	1,507,336	1,405,795	101,541	6.7	77.5
0-15........	641,047	--	--	--	--	--
16-17........	114,458	79,537	66,623	12,914	16.2	69.5
18-19........	114,458	79,245	70,635	8,610	10.9	69.2
20-24........	262,981	209,100	190,028	19,072	9.1	79.5
25-34........	321,761	298,980	281,865	17,115	5.7	92.9
35-44........	285,893	268,106	255,995	12,111	4.5	93.8
45-64........	579,703	472,282	452,621	19,661	4.2	81.5
65+..........	265,137	100,086	88,028	12,058	12.0	37.7
White Female...	2,926,008	1,330,243	1,231,681	98,562	7.4	57.5
0-15........	612,662	--	--	--	--	--
16-17........	111,779	103,889	88,649	15,240	14.7	92.9
18-19........	111,779	80,116	73,509	6,607	8.2	71.7
20-24........	271,656	215,305	200,461	14,844	6.9	79.3
25-34........	396,567	277,010	259,293	17,717	6.4	69.9
35-44........	318,896	221,570	208,425	13,145	5.9	69.5
45-64........	650,855	386,797	360,867	25,930	6.7	59.4
65+..........	451,814	45,556	40,477	5,079	11.1	10.1
Nonwhite Male...	132,532	62,353	52,348	10,005	16.0	73.2
0-15.........	47,379	--	--	--	--	--
16-17.........	6,675	3,302	1,793	1,509	45.7	49.5
18-19.........	6,675	3,550	2,519	1,031	29.0	53.2
20-24.........	14,743	10,026	8,013	2,013	20.1	68.0
25-34.........	20,462	17,691	15,261	2,430	13.7	86.5
35-44.........	12,857	11,375	10,207	1,168	10.3	88.5
45-64.........	17,815	14,829	13,364	1,465	9.9	83.2
65+...........	5,926	1,580	1,191	389	24.7	26.7
Nonwhite Female..	158,274	66,640	57,224	9,416	14.1	59.8
0-15..........	46,861	--	--	--	--	--
16-17..........	6,708	4,778	3,807	971	20.3	71.2
18-19..........	6,708	4,560	3,743	817	17.9	68.0
20-24..........	16,128	10,632	8,841	1,791	16.8	65.9
25-34..........	28,567	17,769	15,711	2,058	11.6	62.2
35-44..........	19,460	13,049	11,155	1,894	14.5	67.1
45-64..........	23,463	14,384	12,734	1,650	11.5	61.3
65+...........	10,379	1,468	1,233	235	16.0	14.1

Table 42 Additional Planning Data Projections
Massachusetts
Fiscal Year 1981

	Employed Part-time For Economic Reasons
TOTAL..................	99,564
White Male	36,551
White Female..........	56,657
Nonwhite Male	2,408
Nonwhite Female	3,948

	Economically Disadvantaged 18 Years and Over
TOTAL	334,826
White	294,862
Black.........	34,914
Other	5,050
Spanish.......	7,199

Table 43 Additional Unemployment Projections
Massachusetts
Fiscal Year 1981

	Unemployment	Unemployment Rate	Long-Term Unemployment	Number of Different Individuals Unemployed During Year
TOTAL........	219,524	7.4	58,572	667,304
White Male............	101,541	6.7	33,002	313,355
White Female..........	98,562	7.4	20,604	295,686
Nonwhite Male.........	10,005	16.0	3,180	30,015
Nonwhite Female.......	9,416	14.1	1,786	28,248

Table 44 Preliminary CETA Planning Estimates
FY 1981

CETA Consortiums	Title IIBC	Title IID	Title VI	Title VII
Boston City	$ 7,228,000	$7,245,000	$4,718,000	$505,000
EMHRDA Consortium	3,106,000	2,200,000	1,509,000	218,000
New Bedford Consortium	3,092,000	2,802,000	1,828,000	217,000
Hampden County Consortium	3,147,000	2,557,000	1,676,000	198,000
Worcester Consortium	1,852,000	1,360,000	911,000	100,000
Salem Consortium	3,935,000	2,741,000	1,900,000	269,000
Lowell Consortium	1,959,000	1,479,000	1,075,000	92,000
Brockton Consortium	2,037,000	1,653,000	1,171,000	143,000
Fall River Consortium	1,806,000	1,922,000	1,234,000	127,000
Balance of Massachusetts	19,174,000	18,062,000	12,617,000	1,358,000
Pittsfield Consortium	1,694,000	1,006,000	696,000	119,000
Massachusetts	49,030,000	43,027,000	29,335,000	3,346,000

Source: U. S. Department of Labor, Employment and Training Administration, Office of Administration and Management, Preliminary Planning Estimates -- 5/15/1980.

TABLE 45 1978 CETA ELIGIBILITY ESTIMATES FOR SELECTED DEMOGRAPHIC AND TARGET GROUPS

MASSACHUSETTS, PERSONS 14 YEARS AND OLDER

	CIVILIAN POPULATION (IN THS) NOW/NEW.	PERCENT OF POPULATION								
		ELIGIBLE FOR TITLE								
		IIB,VII	IID	YETP	YCCIP	SYEP	VI	ANY LISTED	ANY YOUTH	OTHER LISTED
AGE IN YEARS										
TOTAL 14 YEARS AND OLDER...	4,521	8.0	6.3	2.3	1.2	3.8	6.5	9.5	4.6	8.2
14 TO 15................	197	20.4	9.9	-	-	21.1	9.9	21.1	21.1	21.1
14 TO 19................	619	17.8	10.3	10.7	9.1	19.6	10.3	24.8	24.8	18.2
TOTAL 16 YEARS AND OLDER...	4,325	7.4	6.1	2.4	1.3	3.0	6.4	9.0	3.9	7.8
16 TO 21................	661	16.3	10.7	15.5	8.5	19.5	10.7	25.3	25.3	16.5
16 TO 19................	422	16.6	10.5	15.6	13.3	18.8	10.5	26.5	26.5	16.9
20 TO 21................	239	15.7	11.1	15.3	-	20.6	11.1	23.1	23.1	15.7
22 TO 44................	1,747	8.4	7.7	-	-	-	8.1	8.8	-	8.8
22 TO 39................	1,487	8.5	7.7	-	-	-	8.2	8.9	-	8.9
40 TO 44................	260	8.1	7.5	-	-	-	7.5	8.1	-	8.1
45 TO 54................	645	4.7	4.3	-	-	-	4.9	4.9	-	4.9
55 TO 64................	613	4.0	3.3	-	-	-	3.3	4.0	-	4.0
65 AND OVER.............	658	1.7	1.7	-	-	-	1.9	1.9	-	1.9
MALES....................	2,132	6.3	4.0	2.0	1.3	3.4	4.6	8.3	4.5	6.8
FEMALES..................	2,389	9.4	8.3	2.5	1.2	4.1	8.3	10.6	4.7	9.5
RACE-ETHNICITY										
TOTAL....................	4,521	8.0	6.3	2.3	1.2	3.8	6.5	9.5	4.6	8.2
WHITE, NOT HISPANIC........	4,307	7.0	5.4	1.9	1.2	3.2	5.7	8.5	4.1	7.2
TOTAL MINORITY.............	214	28.2	23.7	9.2	2.7	14.3	24.0	29.8	15.6	28.2
BLACK, NOT HISPANIC.......	107	20.5	18.0	7.1	3.1	9.1	18.0	23.0	11.7	20.5
HISPANIC..................	84	44.2	35.7	14.5	2.9	24.8	36.6	45.0	24.8	44.2
ECONOMIC STATUS										
AT OR BELOW PV.............	453	53.5	42.1	16.4	4.1	27.0	42.6	57.1	27.0	53.8
AT OR BELOW 70% LLSIL......	538	51.0	37.5	16.7	4.5	27.1	38.6	54.8	27.1	51.8
AT,BELOW PV OR AT,BELOW 70% LLSIL.....	545	50.9	37.2	16.8	4.4	27.1	38.4	54.7	27.1	51.7
71 - 85 % LLSIL............	148	6.4	6.4	7.5	-	-	7.4	14.9	7.5	7.4
86 - 100 % LLSIL...........	190	3.5	3.5	-	-	-	6.1	6.1	-	6.1
ABOVE 100 % LLSIL..........	3,639	1.8	1.8	-	.9	.6	1.8	2.7	1.4	1.9

Source: March 1978, Current Population Survey, U. S. Department of Labor.

Note: Subtotals may not add due to rounding.

TABLE 45 1978 CETA ELIGIBILITY ESTIMATES FOR SELECTED DEMOGRAPHIC AND TARGET GROUPS-Continued

MASSACHUSETTS, PERSONS 14 YEARS AND OLDER (continued)

	CIVILIAN POPULATION (IN THS)	PERCENT OF POPULATION								
		ELIGIBLE FOR TITLE								
		IIB,VII	IID	YETP	YCCIP	SYEP	VI	ANY LISTED	ANY YOUTH	OTHER LISTED
EDUCATION										
UNDER 9 YEARS	723	13.4	11.2	1.8	-	6.8	11.2	14.0	6.8	13.8
9 - 11	790	14.5	11.2	6.3	5.0	8.3	11.6	19.0	11.7	15.0
12	1,612	7.0	5.7	1.7	1.0	2.3	6.0	7.7	2.8	7.0
13 - 15	669	4.4	2.5	2.0	.2	2.4	3.2	6.7	3.1	5.1
16 OR MORE	727	.9	.6	-	-	.2	.8	1.3	.2	1.1
MALE VETERANS										
VIETNAM ERA	177	5.5	3.6	-	-	.8	4.4	6.3	.8	6.3
OTHER VETERAN	596	4.6	3.2	.3	-	.3	4.1	5.1	.3	5.1
NON VETERAN	1,359	7.2	4.4	3.1	2.0	5.2	4.9	9.9	6.9	7.7
FAMILY STATUS										
SINGLE PARENT	143	63.2	62.1	7.9	1.1	7.9	62.1	63.2	7.9	63.2
PARENT IN TWO PARENT FAMILY	1,208	4.8	4.3	-	-	.1	4.9	5.3	.1	5.2
OTHER FAMILY MEMBER	2,441	6.1	4.0	2.8	1.9	5.0	4.2	8.1	6.5	6.3
NON DEPENDENT INDIVIDUAL	730	8.8	6.2	3.3	1.2	4.8	6.4	10.8	5.2	9.0
WELFARE STATUS										
AFDC	274	99.0	100.0	19.7	8.7	32.5	100.0	100.0	32.5	100.0
SSI	153	15.4	12.1	4.4	1.1	9.7	12.1	18.4	9.7	15.4
NO WELFARE	4,247	2.1	.2	1.1	.8	1.9	.5	3.7	2.8	2.3

Source: March 1978, Current Population Survey, U. S. Department of Labor.
Note: Subtotals may not add due to rounding.

X. Training Opportunities for Massachusetts Labor Force

Each year, a large amount of tax dollars is spent on employment and training programs in Massachusetts. These programs are designed to train and improve the employability and productivity of the state's labor force. This section has been designed to overview the programs and services implemented in the Commonwealth to aid in the recruiting and training of individuals needing employability services and to improve the Massachusetts' labor force in a growing economy.

A. Work Incentive Program (WIN)

The Work Incentive Program (WIN) was originally created by the 1967 amendments to the Social Security Act but was significantly changed by the 1971 Amendment to the Act. WIN is jointly administered by the U. S. Department of Labor and the U. S. Department of Health, and Human Services through the state employment agencies all over the country.

The 1971 amendments mandated the requirements that all persons applying for or receiving Aid to Families with Dependent Children (AFDC) must register with the WIN program for employment or training as a condition of eligibility for AFDC. The WIN program is a major effort to help those people receiving AFDC to become productive workers. The program provides social, medical, and childcare services and offers counseling, employability planning, work and training assignments, job placement and other assistance. The major emphasis of the program is putting individuals into immediate job placement rather than on counseling or extensive institutional training; thus, the AFDC recipients receive more emphasis on seeking employment rather than just receiving their AFDC welfare payment. The program is represented by 36 teams throughout Massachusetts.

An interesting aspect of the WIN Program is the number of individuals in working registrants status. A working registrant is a sole parent who is employed more than 30 hours a week and who receives an AFDC supplement to wages earned. They will be deregistered from the WIN Program when their wages(after pay raises and promotions) reach a level which makes them ineligible to receive AFDC payments. Over 19 percent of WIN registrants are in working registrant status, an incremental approach to economic self-sufficiency. An additional five percent are in subsidized employment components. When the WIN registrants are working more than 30 hours a week, are in unsubsidized employment, and are no longer receiving AFDC payments, they are deregistered from the program.

B. Comprehensive Employment and Training Act (CETA)

The Comprehensive Employment and Training Act of 1973 was developed in Massachusetts to establish a new community employment service system to aid persons in job placement as well as providing them with training and other supportive services. There are eleven Prime Sponsors, ten of which represent consortia of municipalities based on the following cities: Boston, Cambridge, Fall River, Worcester, Springfield, Lowell, New Bedford, Brockton, Pittsfield, Salem, plus a sponsor - the balance of state.

The CETA Act of 1973 was implemented in Massachusetts with the purpose of identifying and allotting funds to target groups which are experiencing job-related problems. Some of these target groups are the long-term unemployed, economically disadvantaged, ex-offenders, older workers, persons with a limited knowledge of the English language, and Vietnam-era veterans.

CETA Eligibility Information

Title IIB: Services available under this Title include : Orientation, Assessment (including Testing), Classroom Occupational Training, On-the-Job Training, Work Experience, Individual Referral to short term public and private vocational training courses and job development. Basic Education, English as a Second Language and GED courses are also available, in combination with vocational training, for employability improvement. All of these services are designed to improve the employability of participants within relatively short periods of time. At this time, there are no provisions for remedial education or vocational training courses which would require a great length of time.

Eligibility:

Applicants must be:

1. Economically disadvantaged and unemployed or underemployed and a member of a significant segment.
2. Willing and able to participate in ES/CETA services programs.
3. Lacking a marketable skill.

Limits Participation:

1. No one can be in any CETA program longer than 2-2½ years in a five-year period.

2. No one can be in PSE longer than 78 weeks in a five-year period. There also is a waiver for on-board enrollees at the Secretary's discretion if a prime sponsor is having extreme hardship in placing PSE enrollees in unsubsidized jobs, or if the area has 7 percent or more unemployment.

PSE wages may not exceed $10,000 per year, adjusted upward by the ratio that local wage rates bear to national average, but not to exceed 20% of the maximum (no more than $12,000), with some exceptions. Further, average wages in each prime sponsor area may not exceed $7,200, adjusted by the ratio that the local wage bears to the national average.

Title IID: This Title provides temporary public service jobs in State, City, Town, County agencies and departments. These jobs are now limited to a one-year duration. Job development services are provided to place participants in subsidized employment.

Eligibility

Participants in training programs and services (except upgrading and retraining) must have been economically disadvantaged and either unemployed, underemployed, or in school. Participants in PSE must have been economically disadvantaged and unemployed 15 or more weeks or on welfare. PSE must be entry level and combined with training and supportive services, if availabe. Supplementation of wages under this title is specifically prohibited.

Title III Special Federal Responsibilities: Programs for persons who have a particular disadvantage in the labor market, including Native Americans, migrants and other seasonal farmworkers, the handicapped, women, displaced homemakers, public assistance recipients, and other special target groups.

Authorized welfare demonstration projects, projects for the middle-aged and older workers, and a program for better coordination between prime sponsors and state employment security agencies are included.

Title IV Youth Programs: The Job Corps, Summer Youth Programs, and programs enacted in the Youth Employment and Demonstration Project Act of 1977 (except the Young Adult Conservation Corps which is still Title VIII), namely, Youth Incentive Entitlement Pilot Projects, and Youth Employment and Training Programs. The Job Corps and Summer Youth Program are authorized for 4 years, and the 3 new youth programs for 2.

1. The Youth Employment Training Program (YETP): under the CETA Act, involves such services as classroom and on-the-job training, testing, placement, and work experience programs for youth ages 16 to 21, who meet certain low income criteria. The YETP pays firms to train young people in specific job-related skills.

2. Youth Incentive Entitlement Pilot Projects: The purpose of the Youth Incentive Entitlement Pilot Projects under the CETA Act is to test the impact on high school return, retention, and completion rates of a job guarantee for 16 to 19 year old disadvantaged youth who are in school or willing to return. The program provides wage subsidies for companies who offer new part-time jobs, or part-time jobs and training for these youth after school and during summer vacations. Participation of Massachusetts firms in this program encourages young people to complete their education and at the same time eases their transition into the work force.

3. Youth Community Conservation and Improvement Project: This is a CETA program which seeks to employ 16-19 year olds in work projects which will benefit the community. Business, public and private agencies, schools, and other community based organizations work together to design and operate subjects that provide youth with employment, work experience, skill training and opportunities for community service.

Title VI Countercyclical Public Service Employment Program: Temporary public service employment opportunities during periods of high unemployment, in sufficient number to employ 20 percent of the unemployed in excess of 4 percent unemployment, and 25 percent of the excess when national unemployment is 7 percent or higher. Participants must be unemployed at least 10 of the last 12 weeks or on welfare, and from a family whose income does not exceed the BLS lower living standard budget.

Title VII Private Sector Opportunities for the Economically Disadvantaged: Authorized a Private Sector Initiative Program (PSIP) to demonstrate the effectiveness of ways of increasing the involvement of the business community, including minority and small businesses, in employment and training activities supported by CETA, and increase private sector jobs for the economically disadvantaged.

Provides funds for the establishment of private industry councils (a majority of whose members must be from the business community) which shall participate with prime sponsors in developing opportunities for economically disadvantaged persons in the private sector.

Title VIII Young Adult Conservation Corps: Provides employment and experience in various occupational skills to out-of-school young people from all social and economic backgrounds through work on conservation and other projects on federal and nonfederal public lands and waters. Participants may be hired for a maximum of 12 months. Operated under agreement by the Department of Labor, Agriculture and interior.. Authorized for 4 years, through FY 1982.

C. Apprenticeship Program:

Apprentice training is a system under which a trainee acquires vocational skills "on-the-job" by working with journeyman craftsmen for a designated period of time. The training periods usually range from one to six years; most trade occupations require three to four years. The trainees are paid while they are training on the job. The wage rates usually start at about half the journeyman's rate up to 95 percent of the full pay near the end of the apprenticeship.

Apprenticeship programs are conducted as a joint effort by employers and schools with related instruction given in vocational schools and junior colleges, sometimes utilizing home study courses. During the duration of the program, study records are kept and the training progress of the apprentices are frequently evaluated. All apprenticeship programs in the Commonwealth must be approved by and registered with the State Division of Apprentice Training.

Both men and women are eligible to apply, both must be at least 16 years of age. The applicants must be physically able to do the work of the trade. There are approximately 415 apprenticeable trades, many being specialized jobs within certain occupations.

D. Job Corps - How It Works:

A national system of 60 residential centers in 31 States and Puerto Rico provides basic education, vocational training, counseling, health care, and similar renewal services to help disadvantaged young men and women, 16 through 21, prepare for jobs and for responsible citizenship.

Enrollees in Job Corps residential centers receive room and board, clothing for work and dress, books and other learning supplies, and cash allowance, part of which is paid on leaving the program after satisfactory participation. A few of the centers can also accomodate young people who do not live on center but take training during the day. Enrollees may stay in Job Corps as long as 2 years, and at the end of their stay are given assistance in finding a job.

Training, often by skilled union workers, is given in such occupations as heavy equipment, auto repair, carpentry, painting, masonry, nursing and other health care jobs, clerical and office work, and electronic assembly. Basic education includes reading, mathematics, social studies, and preparation for the General Education Development (GED) high school equivalency examination.

APPENDIX

Commuting In Massachusetts

As the cost of gasoline increases, individuals and employers are seeking alternative ways of getting people to work. The Massachusetts state government offers a variety of services to assist in solving commuter problems including technical assistance, job matching services, and public commuter transit.

The Executive Office of Transportation and Construction provides technical assistance concerning the considerable commuter transportation assets of Massachusetts to site locators and to companies considering moving into or relocating within Massachusetts.

Masspool

The State Office of Transportation helps individuals and companies to set up carpools. Masspool staff through visits and promotional material will assist large firms to set up employer-based ridersharing programs.

Caravan

For large firms situated in areas not serviced by mass transportation, Caravan for Masspool, Inc., provides vehicles to commuter groups for use by vanpooling employees. When seats are available in Caravan pools, they are open to individuals in eligible areas who live more than 15 miles from their job.

Job Match

For those who are unemployed and for those who are considering job changes due to transportation problems, the Job Matching Service is available. The Job Bank Identifier (JBID) location grid zones in the computer assisted job matching system insure that job seekers are matched with firms within their commuting area.

Regional Public Transit

There are 14 regional transit authorities providing bus service to communities in Massachusetts: Berkshire Regional, Pioneer Valley, Franklin Regional, Greenfield-Montague, Worcester Regional, Montachusetts Regional,Lowell Regional, Merrimack Valley Regional, Cape Ann, Brockton Area, Greater Attleboro-Taunton Regional, Southeastern Regional, Barnstable Area, and Massachusetts Bay. Individuals considering switching from car to commuter transit can use the Yellow Pages to get the phone number of the regional transit authority. Both public and private carriers are listed under Bus Lines.

Intercity Bus Carriers

Intercity bus lines that serve the state include A.B.C. Coach Line, between Providence and Boston; Bay State Commuter, between Middleboro and Boston; Bonanza Bus Lines, between Providence and Boston; Boston Commuter, between Haverhill and Boston; and Cape Cod Bus Lines, between Hyannis and Provincetown.

Also, Kinson Bus Lines, between Amesbury and Boston; Mederios Bus Company, between New Bedford and Boston; Michaud Bus Lines, between Rochester, New Hampshire, and Boston; and Plymouth and Brockton, between Hyannis and Boston.

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ANNUAL PLANNING INFORMATION REPORT
FISCAL YEAR 1982
MASSACHUSETTS

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LABOR AREA RESEARCH PUBLICATION

Massachusetts Division of Employment Security

job market research

THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY
Charles F. Hurley Building
Government Center, Boston MA. 02114

ANNUAL PLANNING INFORMATION REPORT
FISCAL YEAR 1982

THE COMMONWEALTH OF MASSACHUSETTS

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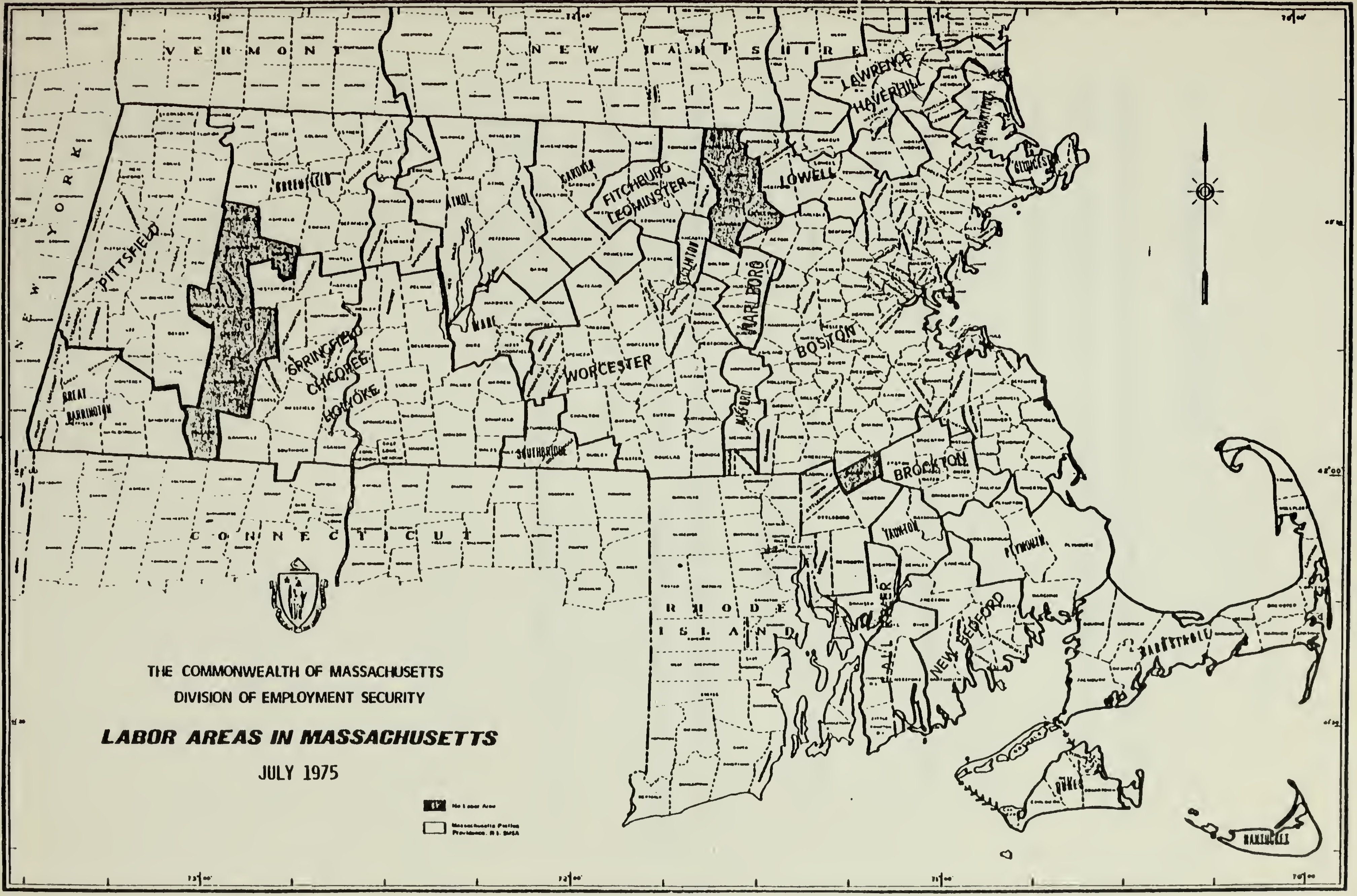

THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

LABOR AREAS IN MASSACHUSETTS

JULY 1975

IA. Highlights and Conclusions

Massachusetts population grew less than one percent from 1970 to 1980. The northeast part of the state lost population, the southeastern part gained.

We will not weather the next round of the recession as well as we did the first because of international and national economic developments.

The unemployment rate will be higher and closer to the national average than it has been for the past two years.

Nonagricultural wage and salary employment will increase but not as fast as in the recent past. Biggest gainers will be durable goods and services employment.

Budget cutbacks on all levels of government will cause substantial declines in public payrolls.

IB. ASSUMPTIONS AND PROJECTIONS FOR THE ECONOMY
COMMONWEALTH OF MASSACHUSETTS
FEDERAL FISCAL YEAR 1982 (FFY'82)

The Job Market Research staff of the Division of Employment Security gathers data; analyzes and reports on changes in the state's employment and unemployment situation. Even utilizing the most current data and computer models of the state and national economies, it is difficult to project future economic conditions. Forecasting is especially difficult during times of rapid change, such as we have been experiencing. The economic forecasts presented in this report are based on data available at the end of May, 1981.

1) Employment

Total employment in Massachusetts, reported in the Current Population Statistics (CPS) series, is expected to average 2,814,000 during FFY'82, an increase of about 30,000 from FFY'81.

Nonagricultural wage and salary jobs, reported in the Current Employment Statistics series (CES-790) is expected to average 2,731,100, an increase of 50,000 jobs from FFY'81 to FFY'82.

It is important to remember that the CPS estimates the number of people employed or unemployed based on their place of residence, whereas the CES-790 estimates the number of jobs based on employer location. Massachusetts has traditionally had a large proportion of dual job holders. Much of the job increase in services and in wholesale and retail trade will be part-time positions.

PROJECTED EMPLOYMENT BY INDUSTRY GROUP

Industry	Employment (in 000's)		
	FFY 1980 (Actual)	FFY 1981 (Projected)1/	FFY 1982 (Projected)
TOTAL NONAGRICULTURAL EMPLOYMENT	2642.2	2679.1	2731.1
Manufacturing - Total	675.7	669.1	681.6
Durable Goods	409.5	410.8	425.1
Nondurable Goods	266.2	258.3	256.5
Construction	74.8	74.3	81.7
Transportation, Communications and Public Utilities	122.0	124.8	125.2
Wholesale and Retail Trade	570.7	579.2	594.0
Finance, Insurance and Real Estate	157.6	162.5	165.4
Services	629.2	664.8	690.1
Government	412.3	404.3	393.1
Federal	58.5	57.5	56.0
State	97.3	98.6	96.6
Local	256.5	248.2	240.5

1/ Projection based on actual data for seven months and estimates for five months.

2) Unemployment

We project that Massachusetts' unemployment rate will average 5.7 percent during FFY'82, down from 5.9 percent in FFY'81 and one to one-and-a-half percentage points below the national average of 6.9 percent in FFY'82.

	MASSACHUSETTS				U.S.
	Labor Force (in 000's)	Employment (in 000's)	Unemployment (in 000's)	Unemp. Rate(%)	Unemp. Rate(%)
FFY'80	2863.6	2703.3	160.3	5.6	6.8
FFY'81	2957.1	2783.8	173.3	5.9	7.4
FFY'82	2984.1	2814.0	170.1	5.7	6.9

3) Labor Turnover in Manufacturing

Due to a strengthening economy, the number of layoffs is anticipated to decline in FFY'82. On the other hand, the level of quits may also be comparatively low, reflecting in part some uncertainty among the labor force about the strength of the job market. Recalls, which are a function of prior layoffs will be low. The growth in the durable goods industries will be reflected in a stronger rate of new hires.

4) Wages and Inflation

Wages are expected to increase by 8.7 percent, down slightly from the 9.5 percent increase in FFY'81. Total Massachusetts personal income, however, is expected to rise by nearly 11.5 percent. If the proposed decrease in federal personal income taxes takes effect, total disposable income may rise by as much as 12.5 percent. For the first time in several years, the increase in personal income will be greater than the rate of inflation. The era of double-digit inflation is expected to end during FFY'82. The projected increase in the Boston Consumer Price Index (CPI) is 8.7 percent, down from the 11.4 percent in FFY'81. Massachusetts' FFY'81 and '82 rates are both below the national CPI increases for these periods.

5) Credit

Consumers wanting loans of any type; mortgage, home repair, car, or personal; will find that the supply of money will continue to be very tight, with interest rates remaining variable but high throughout FFY'82. Currently, interest rates on home mortgages are over 16 percent, on personal loans over 18 percent, and on commercial and construction loans about 20 percent, however, loans are being made at both higher and lower rates. Banks and credit unions have significantly decreased or stopped making certain kinds of loans altogether.

A major cause of the tight money situation is the shift of money from regular savings accounts, where rates are limited by law, to savings certificates, money market accounts, and treasury obligations. All interest rates are sensitive to changes in U.S. Treasury and Federal Reserve Bank Policies. The size of the Federal tax cut and of the Federal budget deficit will influence the amount and cost of credit in FFY'82. More loan money is expected to go to commercial borrowers next year rather than to those purchasing homes or cars.

There are several pieces of legislation pending before Congress which are expected to affect the level of savings, and thus the amount of credit available. Perhaps the most important is the tax cut, which will increase the amount of disposable (and potentially savable) income. Congress is also considering bills that would: 1.) free certain amounts of savings income from taxes, and 2.) gradually lift the restrictions on the amount of interest banks can pay on passbook accounts.

6) Defense Contracts

Defense contract spending is expected to increase. The dollar value of military prime contracts going to Massachusetts firms has been over five percent of the total awarded nationally for the last three years. We expect our percentage share of the awards to remain steady or increase slightly. With the proposed increase in military spending in the coming years, defense contracts in Massachusetts should provide strong support for the state's economy.

7) Energy

Energy costs are not expected to rise as rapidly during FFY'82 as they have in the recent past. From January 1979 to January 1981 the average price for a gallon of home heating oil rose 104.7 percent in Massachusetts. Continued conservation and conversion to less expensive energy sources will help to hold future prices down. The industrial mix in Massachusetts is not, relatively, energy intensive, therefore, we do not expect that rising energy costs will hurt our industrial production to the extent it may in the rest of the nation. The present world oil glut should moderate gasoline and oil prices. The unknown in the energy situation remains Mideast political conflicts.

8) Exports

Massachusetts will continue to rank among the top ten states exporting manufactured products. Our leading exports will remain high technology equipment: instruments, electronic equipment, and computers. The actual demand for these products will be influenced by the rate of economic recovery in the European Common Market countries.

II. Description of the State

A. Massachusetts Labor Areas

The United States Department of Labor Employment and Training Administration has apportioned the Commonwealth of Massachusetts into the following:

Four Standard Metropolitan Statistical Areas (SMSA)

Boston
Brockton
Fitchburg-Leominster
Lawrence-Haverhill

Seven Major Labor Market Areas (LMA)

Fall River
Lowell
New Bedford
Pittsfield
Springfield-Chicopee-Holyoke
Worcester
Massachusetts Portion of the
Providence-Pawtucket, Rhode Island Labor Area

Sixteen Small Labor Market Areas (LMA)

Athol
Barnstable County
Clinton
Dukes
Gardner
Gloucester
Great Barrington
Greenfield
Marlborough
Milford
Nantucket County
Newburyport
Plymouth
Southbridge
Taunton
Ware

and fifteen towns with no labor area attachment which comprise the Balance of State.

A "labor area" consists of a central city or cities and the surrounding territory within commuting distance. It is an economically integrated geographical unit within which workers may readily change jobs without changing their place of residence. Labor areas usually include one or more entire counties, except in New England where towns are considered the major geographical units.

B. Massachusetts CETA Areas by Prime Sponsors

Boston
Brockton
Cambridge
Fall River
Lowell
New Bedford
Pittsfield
Salem
Springfield
Worcester
Balance of Massachusetts

C. Massachusetts Job Bank Areas

Boston
Brockton
Fall River
Fitchburg-Leominster
Lawrence-Haverhill
Lowell
New Bedford
Pittsfield
Springfield-Chicopee-Holyoke
Worcester
Balance of State

D. Description of Massachusetts

Massachusetts is located in the Northeastern section of the Continental United States bordered by the states of Vermont and New Hampshire on the north, the Atlantic Ocean on the east, the states of Rhode Island and Connecticut on the south and the state of New York on the west. The area of the state is 8,093.02 square miles. Of this total, 7,838.68 square miles is land, while water covers an additional 254.34 square miles.

The climate of the State is favorable to industrial enterprise.

	Boston	New Bedford	Pittsfield	Worcester
Normal Temp. in Jan.	29.9°F	29.0°F	21.8°F	25.9°F
Normal Temp. in July	73.7°F	72.8°F	67.8°F	70.6°F
Normal Annual Precip.	42.8 inch.	45.3 inch.	44.4 inch.	45.4 inch.

Long renowned for its historical heritage, Massachusetts can claim impressive historical accomplishments aiding intellectual, cultural and social contributions to the founding and growth of the nation.

The State's Department of Commerce divides the Commonwealth into seven topographic regions. From east to west they are: (1) Cape Cod-flat, nearly at sea level with many lake or pond filled depressions; (2) Boston Basin-gentle contour with tear-drop shaped hills; (3) Seaboard Lowland-flat to gently rolling with 1,000 to 2,000 foot elevations; (4) New England Upland-rolling to hilly plateau with 1,000 to 2,000 foot elevations; (5) Lower Connecticut Valley-flat to gently rolling with less than 100 to 400 foot elevations; (6) Berkshire Hills-rough rolling upland with a general elevation of 2,000 feet and (7) Green Mountains and Foot Hills-rugged and mountainous with 1,500 to 3,000 foot elevations.

E. Transportation (courtesy of the Mass. Dept. of Commerce)

a. General: The Commonwealth of Massachusetts has adequate facilities for handling air, land and water transportation. Thirteen established regional planning agencies, encompassing within their regions all but 8 of the 351 municipalities, have, as one of their areas of interest, the planning for adequate transportation facilities.

b. Air: Logan International Airport in Boston is the heart of air activity in the state. This airport is the 13th busiest in the world, based on number of passengers with tickets starting or terminating at Boston. Logan is the nearest major United States' airport to its downtown business district and to Europe. In addition, the Commonwealth has 52 commercial airports, of which 26 are publicly operated and 26 privately. There are also 3 military airfields and 154 private restricted fields.

c. Commuting: The Boston and Maine Railroad supplies commuter service in the Boston Area subsidized by the Massachusetts Bay Transportation Authority, a state-created agency charged with the responsibility to supply commuter service to 79 municipalities in eastern Massachusetts. Rail commuter service has also been extended outside the Boston area to Concord, N.H. and Providence, R.I. and in Massachusetts to Franklin, Gardner, Haverhill and Rockport. Besides rail service, the MBTA serves commuters with fleets of buses, trolley busses, subway and elevated trains and high-speed trolley cars. Rapid transit facilities have been extended to the north, are being relocated to the railroad right-of-way to the south and extended on the Braintree-Cambridge line to the northwest.

Recognizing the responsibility of government to supply public services when private enterprises finds itself inadequate to the task, the 1973 session of the General Court enacted legislation providing for the creation of 10 transportation authorities to serve 10 population centers of the state, subject to acceptance by the municipalities permitted to form the 10 authorities. Provision is made in the law for the municipalities adjacent to an authority's area to join said area. The 1973 law permitted the following named areas to be served by these authorities: Attleboro-Taunton, Brockton, Cape Cod, Fall River-New Bedford, Fitchburg-Leominster-Gardner, Lawrence-Haverhill, Lowell, Pittsfield, Springfield-Chicopee-Holyoke, and Worcester.

d. Highway: The major highways serving the Commonwealth can best be described as those routes emanating from Boston and vicinity like the spokes of a wheel, or ribs of a fan, strengthed by 2 arcs of radials supporting the ribs or spokes. Listed counter-clockwise: I-95 northeasterly to Maine, I-93 and US-3 to New Hampshire, the cross-state routes-State 2 (to New York), US-20 (to the Pacific Ocean in Oregon), State 9 (to Pittsfield, Mass.), I-90, the Massachusetts Turnpike, (to Seattle, Washington), and the southern route I-95 (to Florida), State 24 (to I-195 in Fall River) and State 3 (to Cape Cod). I-91 passes north to south through the Connecticut River Valley intersecting with I-90, State 9, U.S. 20 and State 2 and on to connect with Canadian Route 10 to Montreal. The circumferential highways are Routes 128 and 495.

e. Rail: The State is served by 3 Class I railroads - Boston and Maine, Central Vermont (Canadian National) and Conrail, other railroads serving Massachusetts are the Fore River, Grafton and Upton, and Providence and Worcester.

Piggy-Back Service is provided within the State by the Boston and Maine Railroad at Boston, Cambridge, Fitchburg, Holyoke and Worcester and by Conrail at Boston, West Springfield and Worcester.

f. Trucking: The Massachusetts Turnpike (IR 90), one of the State's cross-state routes, has 5 tandem trailer lots at Interchange #1 in West Stockbridge with State Routes 41 and 102, #6 in Chicopee with IR 291, #11 in Millbury with State Route 122, #14 in Weston with State Route 128 and #18 in Boston at the Beacon railyard in the Allston section of the city.

g. Water: The six major ports in Massachusetts with 1978 statistics from the U.S. Corps of Engineers are:

Port	Total Port Tonnage	Import Tonnage
Beverly	242,509	---
Boston	26,073,590	6,712,290
Fall River	4,820,427	1,969,260
Gloucester	214,748	125,972
New Bedford-Fairhaven	226,198	62,998
Salem	1,487,230	784,363
Remainder of State	308,145	8

Boston, the largest port, has one of the best natural, deep-water harbors in the world. It is 200 miles nearer Africa and Europe than New York City, 1,200 miles nearer Panama and the West Coast of South America than San Francisco, and nearer Rio de Janeiro and Buenos Aires than any other North Atlantic Port.

Boston is one of the leading container shipping ports in the world with equipment surpassed by none.

F. Population: The state's population increased very slowly during the seventies. The 1980 Census found only 47,867 more individuals in Massachusetts than the 1970 count. The small increase, only eight-tenths of a percentage point, was due to a low birth rate combined with substantial outmigration caused by the two recessions in the seventies. Most areas within the state showed low population growth or population declines. The exceptions were the southeastern part of the state (which showed a substantial increase) and the upper Connecticut River Valley.

In addition, the Census revealed that the state's racial distribution remained predominantly White although there have been substantial increases in the state's Nonwhite population groups. The counties of the state in which the percentage of Whites in the total population fell below 90 percent were Suffolk and Hampden, due to the large numbers of Nonwhites who live in the cities of Boston and Springfield and the outmigration of Whites from these counties. The number of individuals of Spanish origin within the state has been also increased. The Hispanic population was primarily concentrated in Suffolk and Hampden Counties (more than five percent of the population).

The Lawrence/Berkeley Labs at the University of California have processed a demographic breakdown of Massachusetts' estimated population as of July 1, 1982 (Table 3). These are population estimates based on updates of the 1970 Census. Until the age data is available from the 1980 Census, the Lawrence/Berkeley Series represents the best information available concerning the state's population, sex, and age distribution.

G. Labor Force:

Table 4 contains estimates about the race, sex, and age makeup of the labor force in 1982. The individual units which make up the Table will be subject to substantial revisions once the labor force data from the 1980 Census becomes available. Until then, however, these numbers are our best current estimates of the labor force characteristics in 1982. We expect that there will be fewer White males over 35 years of age in the labor force in 1982 than there were in 1970. The greatest estimated numberical increases are found among White women, and the greatest percentage increases among Nonwhites.

The data on Table 5 shows all major demographic groups for which 1980 Labor Force Participation Rate information was available. In each case, the Massachusetts group had a higher participation rate than their national counterparts. Our Labor Force Participation Rates are particularly high in comparison with those of other large industrial states.

Table 1
Total Population
Massachusetts and Counties

Area	1980 Population	1970 Population	Percent Change 1970 to 1980
Massachusetts	5,737,037	5,689,170	+ 0.8
Counties			
Barnstable	147,925	96,656	+53.0
Berkshire	145,110	149,402	- 2.9
Bristol	474,641	444,301	+ 6.8
Dukes	8,942	6,117	+46.2
Essex	633,632	637,887	- 0.7
Franklin	64,317	59,210	+ 8.6
Hampden	443,018	459,050	- 3.5
Hampshire	138,813	123,981	+12.0
Middlesex	1,367,034	1,398,397	- 2.2
Nantucket	5,087	3,774	+34.8
Norfolk	606,587	604,854	+ 0.3
Plymouth	405,437	333,314	+21.6
Suffolk	650,142	735,190	-11.6
Worcester	646,352	637,037	+ 1.5

Source: Bureau of the Census
PHC 80-V-23: 1980 Census Advance Reports

Table 2
Population by Race and Spanish Origin
Massachusetts and Counties

	Total	Race										Spanish Origin	
		White		Black		American Indian Eskimo & Aleut.		Asian & Pacific Islander		Other			
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Massachusetts	5,737,037	5,362,836	93.5	221,279	3.9	7,743	0.1	49,501	0.9	95,678	1.7	141,043	2.5
Counties													
Barnstable	147,925	142,967	96.6	1,796	1.2	812	0.5	447	0.3	1,903	1.3	1,054	0.7
Berkshire	145,110	142,064	97.9	2,036	1.4	116	0.1	458	0.3	436	0.3	874	0.6
Bristol	474,641	457,376	96.4	4,795	1.0	598	0.1	1,489	0.3	10,383	2.2	10,435	2.2
Dukes	8,942	8,394	93.9	307	3.4	154	1.7	16	0.2	71	0.8	78	0.9
Essex	633,632	613,580	96.8	6,675	1.1	650	0.1	2,377	0.4	10,350	1.6	16,923	2.7
Franklin	64,317	63,541	98.8	285	0.4	81	0.1	204	0.3	206	0.3	311	0.5
Hampden	443,018	396,175	89.4	27,794	6.3	472	0.1	1,565	0.4	17,012	3.8	22,742	5.1
Hampshire	138,813	134,439	96.8	2,013	1.5	138	0.1	1,133	0.8	1,090	0.8	1,733	1.2
Middlesex	1,367,034	1,313,206	96.1	25,358	1.9	1,255	0.1	16,035	1.2	11,180	0.8	23,537	1.7
Nantucket	5,087	4,903	96.4	106	2.1	3	0.1	10	0.2	65	1.3	32	0.6
Norfolk	606,587	591,716	97.5	6,014	1.0	506	0.1	6,001	1.0	2,350	0.4	4,617	0.8
Plymouth	405,437	389,358	96.0	8,144	2.0	678	0.2	1,425	0.4	5,832	1.4	4,429	1.1
Suffolk	650,142	478,227	73.6	127,232	19.6	1,383	0.2	15,501	2.4	27,799	4.3	40,061	6.2
Worcester	646,352	626,890	97.0	8,724	1.3	897	0.1	2,840	0.4	7,001	1.1	14,217	2.2

Source: Bureau of the Census
PHC80-V-23: 1980 Census Advance Reports

Table 3
Population Composition Projected Change
Massachusetts
1970-1982

	Population April 1, 1970	Projected Population July 1, 1982	Change 1970 to 1982	
			Number	Percent
TOTAL	5,689,170	5,750,000	60,830	1.1
White Male	2,621,003	2,549,639	- 71,364	- 2.7
0-15	818,386	582,526	-235,860	-28.8
16-17	101,553	103,568	2,015	2.0
18-19	94,566	103,568	9,002	9.5
20-24	203,459	261,625	58,166	28.6
25-34	309,779	432,203	122,424	39.5
35-44	299,287	283,941	- 15,346	- 5.1
45-64	553,719	528,967	- 24,752	- 4.5
65+	240,254	253,241	12,987	5.4
White Female	2,863,354	2,797,861	- 65,493	- 2.3
0-15	786,308	554,314	-231,994	-29.5
16-17	97,336	102,764	5,428	5.6
18-19	103,082	102,764	- 318	- 0.3
20-24	232,024	257,381	25,357	10.9
25-34	319,591	425,733	106,142	33.2
35-44	311,648	298,470	- 13,178	- 4.2
45-64	629,217	616,278	- 12,939	- 2.1
65+	384,148	440,157	56,009	14.6
Nonwhite Male	97,063	190,543	93,480	96.3
0-15	37,807	62,073	24,266	64.2
16-17	3,619	7,835	4,216	116.5
18-19	3,931	7,835	3,904	99.3
20-24	8,402	25,554	17,152	49.0
25-34	13,904	36,240	22,336	160.6
35-44	10,783	21,560	10,777	99.9
45-64	13,394	22,407	9,013	67.3
65+	5,223	7,039	1,816	34.8
Nonwhite Female	107,750	211,957	104,207	96.7
0-15	37,658	62,806	25,148	66.8
16-17	3,631	7,805	4,174	115.0
18-19	4,337	7,805	3,468	80.0
20-24	10,603	26,489	15,886	149.8
25-34	16,579	43,034	26,455	159.6
35-44	12,394	26,815	14,421	116.4
45-64	15,441	27,073	11,632	75.3
65+	7,107	10,130	3,023	42.5

Source: Lawrence/Berkeley Labs

Table 4
Labor Force Composition Projected Change

1970 - 1982

Massachusetts

Race and Age	April 1, 1970	July 1, 1982	Change 1970 to 1982	
			Number	Percent
TOTAL	2,389,419	2,977,900	588,481	24.6
White Males	1,384,209	1,489,877	105,668	7.6
16-17	46,890	72,577	25,687	54.8
18-19	53,302	70,471	17,169	32.2
20-24	145,971	205,752	59,781	41.0
25-34	286,184	397,331	111,147	38.8
35-44	283,408	262,963	- 20,445	- 7.2
45-64	499,336	422,380	- 76,956	-15.4
65+	69,118	58,403	- 10,715	-15.5
White Females	931,616	1,318,033	386,417	41.5
16-17	40,471	96,348	55,877	138.1
18-19	54,112	74,205	20,093	37.1
20-24	141,914	206,931	65,017	45.8
25-34	137,608	311,057	173,449	126.0
35-44	157,991	215,367	57,376	36.3
45-64	353,738	368,917	15,179	4.3
65+	45,783	45,209	- 574	- 1.3
Nonwhite Males	40,457	85,119	44,662	110.4
16-17	1,092	3,580	2,488	227.8
18-19	1,656	3,693	2,037	123.0
20-24	5,059	14,250	9,191	181.7
25-34	11,197	27,377	16,180	144.5
35-44	8,880	17,241	8,361	94.2
45-64	11,266	17,131	5,865	52.1
65+	1,307	1,847	540	41.3
Nonwhite Females	33,137	84,871	51,734	156.1
16-17	978	5,860	4,882	499.2
18-19	1,976	5,368	3,392	171.7
20-24	5,441	16,285	10,844	199.3
25-34	7,966	24,107	16,141	202.6
35-44	6,733	16,649	9,916	147.3
45-64	8,879	15,355	6,476	72.9
65+	1,164	1,247	83	7.1

Table 5
Labor Force Participation Rates
1980 Annual Average

	Total	Men	Women	Youth 16-19	Whites	Blacks and Others*
United States	63.8	77.4	51.6	56.9	64.1	61.2
Massachusetts	65.6	78.4	54.1	62.5	65.5	67.5
U.S. Massachusetts Percentage Point Difference	+ 1.8	+ 1.0	+ 2.5	+ 5.6	+ 1.4	+ 6.3
Massachusetts Ranking Among the States	21st	24th	18th	14th	24th	6th
Alabama	59.2	72.5	47.2	43.9	60.4	55.8
Alaska	71.3	82.2	60.6	53.3	75.4	54.0
Arizona	62.3	76.5	49.8	63.8	62.5	57.3
Arkansas	60.0	72.4	49.0	54.8	61.3	52.3
California	65.5	78.3	53.8	59.6	65.8	63.7
Colorado	71.4	84.0	59.5	63.3	71.3	72.6
Connecticut	67.7	81.1	56.0	63.5	67.5	70.7
Delaware	64.4	78.1	52.1	60.7	64.7	63.1
Florida	56.3	68.5	45.8	55.8	55.1	63.6
Georgia	64.4	77.4	53.1	53.6	64.8	63.0
Hawaii	63.8	72.0	56.7	50.1	61.3	64.9
Idaho	60.0	73.1	47.4	52.3	60.0	--
Illinois	65.5	79.6	52.6	58.4	66.6	58.6
Indiana	65.7	79.4	53.2	58.6	65.6	66.7
Iowa	66.6	81.3	52.9	65.2	66.9	--
Kansas	67.6	79.9	56.1	65.9	67.6	67.0
Kentucky	62.6	76.6	50.0	54.5	62.9	58.1
Louisiana	60.1	75.3	46.6	45.6	61.1	57.3
Maine	61.5	73.9	50.3	54.0	61.4	--
Maryland	68.3	80.8	57.1	60.0	67.6	71.0
Michigan	63.0	76.9	50.4	60.4	63.9	58.3
Minnesota	69.6	80.6	59.1	71.9	69.5	70.0
Mississippi	59.9	73.1	48.5	48.1	61.0	57.5
Missouri	58.1	70.7	47.0	49.1	58.7	52.4
Montana	64.4	77.6	51.9	56.7	64.9	54.1

Table 5
Labor Force Participation Rates
1980 Annual Average

(continued)

	Total	Men	Women	Youth 16-19	Whites	Blacks and Others*
Nebraska	66.6	79.9	54.5	64.2	66.7	63.9
Nevada	71.1	82.8	59.1	62.8	71.0	72.7
New Hampshire	68.8	81.1	57.3	65.7	68.7	--
New Jersey	64.4	78.6	52.3	51.8	64.5	63.5
New Mexico	61.0	76.4	46.9	51.2	61.5	55.7
New York	60.0	74.5	47.7	45.1	60.4	57.6
North Carolina	66.6	78.8	55.6	56.1	67.7	62.6
North Dakota	65.0	78.6	51.7	59.1	65.3	54.5
Ohio	63.7	78.7	50.5	58.6	64.1	60.5
Oklahoma	61.7	76.3	48.7	56.6	62.5	47.7
Oregon	65.8	78.3	53.8	61.3	65.8	66.9
Pennsylvania	60.0	75.0	46.6	55.3	60.2	57.2
Rhode Island	65.5	77.7	54.7	66.3	65.6	63.8
South Carolina	62.6	75.6	51.2	44.3	64.0	59.1
South Dakota	67.5	80.7	55.3	67.1	68.2	52.7
Tennessee	61.3	74.3	49.5	49.7	61.9	58.2
Texas	65.8	80.4	52.3	58.8	66.0	64.7
Utah	65.9	81.6	51.6	69.7	65.9	65.5
Vermont	66.5	79.0	54.8	61.8	66.5	--
Virginia	66.2	79.6	54.5	54.9	67.2	61.8
Washington	64.8	78.1	52.3	61.8	64.8	65.0
West Virginia	54.7	71.5	39.1	45.8	54.6	--
Wisconsin	67.6	79.8	56.3	68.9	67.8	64.0
Wyoming	70.0	84.5	55.5	63.3	70.2	--

* Labor Force Participation Rates for Black and Others are only available for 43 states.

Source: Draft copy, Geographic Profile of Employment and Unemployment-1980.

III. Economic Development and Outlook Through Federal Fiscal Year 1982

In this section we will give a brief review of Massachusetts' employment trends in the last ten years. Additionally, we will give our projections for employment during Federal Fiscal Year 1982. The data for the review and the projections are presented in seven tables:

Table 6A	shows the Current Employment Series (ES-790) data on Employment for calendar years 1971 through 1980.
Table 6B	gives Current Employment Series data also. This table has calendar years 1979 and 1980 again, and then monthly figures for January through June 1981.
Table 7	presents the percent distribution of the state's nonagricultural wage and salary employment by industry from 1971 through 1980. The percent distribution data should be seen in context with Table 6 . Nonagricultural wage and salary employment increased by 423,600 during the ten years. A given industry's annual average employment could have increased during the ten years and concurrently the industry's percent share of total employment could have declined. To retain the same percentage share of total state nonagricultural employment, an industry's job rolls would have to have grown 19 percent since 1971, or 16.5 percent since 1975's recessionary low.
Table 8	lists the state's industrial employment levels from 1976 to 1980, and the relative share (by percent) of each industry's subsectors.
Table 9	presents the employment levels for the manufacturing industries in April 1981. The data shows the percent share of the industries' employment which is production workers. (Commonly referred to as blue collar employment).

Table 10 presents projections for the state's employment levels through Federal Fiscal Year 1982. These projections are based on the June 1981 forecast of the Massachusetts Economic Policy (MEPA) model done by George I. Treyz and Roy E. Williams at the University of Massachusetts, Amherst campus. The MEPA model is "driven" by the national forecasting model of Data Resources Incorporated, Lexington, Massachusetts. We in the Labor Area Research Department have adjusted some of the employment totals.

Table 11 illustrates by manufacturing industry the Bay State's percentage share of national manufacturing employment from FFY 1980 through FFY 1982. This information is derived from the June 1981 MEPA model forecast.

Employment Review

The Massachusetts economy changed greatly during the 1970's, with strong growth in the high technology and services related industries. From 1971 to 1980 the greatest employment growth was in durable goods manufacturing; wholesale and retail trade; services, finance, insurance, and real estate and government.

Manufacturing is slightly less pervasive in Massachusetts today than it was ten years ago. This is due to the drop in nondurable goods employment. In 1971, nearly one of every seven nonagricultural workers in the state worked in a nondurable type goods manufacturing industry. By 1980 the proportion had gone to less than one in ten. No nondurable goods industry had a higher percentage of total nonagricultural employment in 1980 than in 1971. In contrast, durable goods manufacturing employment has a somewhat larger portion of employment than it did ten years ago. The greatest relative increases were shown by nonelectrical machinery, electrical machinery, transportation equipment, and instruments. Looking ahead, we expect manufacturing to continue to be 25-26 percent of statewide nonagricultural employment. The durable goods sector will increase its relative share, while nondurable goods industries continue their relative decline.

The nonmanufacturing industries have also had a mixed performance. Construction employment decreased both in absolute and relative terms. From 1971 to 1980 annual average construction employment decreased by over 25,000 jobs. To put it another way, in 1971 one out of every twenty-two nonagricultural jobs was in construction; by 1980 the ratio was one out of thirty-six. While both transportation and public utilities,and wholesale and retail trade have greater employment than ten years ago, their relative shares of total employment have declined. The proportion of the finance, insurance, and real estate industries has increased very little. The services sector has had the greatest gain, employment increased by 43 percent during the ten years. In 1980, one out of every four nonagricultural jobs was in services, in 1971 the ratio had been one out of five. Government's share of total employment increased steadily until 1978. Starting in 1979 government employment began to decline. There will be even greater drops in government employment due to budget cuts at all levels of government. The data for state and local government for 1979 and 1980 presents an illusion that state job rolls are increasing while those for municipalities and counties are going down. The actual trend is more complex. Both state and local employment declined from one year to the next. At the same time however, certain local government employees, mostly county courts and hospital workers, were transfered onto the state payrolls. (This resulted in SIC recoding in employment trend series). This move did help ease the burden on local property taxes. It also, unfortunately, masked the trend decline in the state payroll, and made the local government drop look larger than it actually was.

Employment Outlook

There are many elements which need to be considered when assessing future employment trends. Among these elements are taxes, energy costs, and the inflation rate. We do not mean to belittle the importance of any of these factors. For our present purposes, however, it will be sufficient to say that the Administration expects the Federal tax cut to stimulate economic growth and savings, energy costs are more stable than they have been in recent years, and the inflation rate next year is expected by the Administration to drop below 10 percent. The most important considerations for us for next year will be: 1)the trend of the national recession and how it will effect local employment, 2)growth prospects for the high-technology industries and 3)the affects of government cuts.

The latest projections from Data Resources, Inc. (DRI) are that the present decline in economic activity will continue for several more months, with only a modest recovery beginning during the quarter October/December 1981. Traditionally, there has been a lag between economic trends nationally and the business cycle in Massachusetts. That is our local economy usually goes into recession later, and recovers later than does the national economy. Although overall the Bay State weathered the first round of this recession very well, we don't expect to be quite so lucky this time. There are several reasons for this. The cost of credit (interest rates) has remained high longer than anticipated - and interest rates are expected to be high next year as well. At the same time, our private sector could have trouble absorbing the rather large number of government workers we expect to be laid off. Therefore, we believe that Massachusetts could have recessionary conditions right through the January/March 1982 quarter. If so, this will be more consistent with our past trend vis-a-vis the national economy during slowdowns.

Second, there has been a slowing in the rapid growth of many of our high-technology companies. A few have even laid off workers. High interest rates have been a factor. They have made it harder for these firms to service their debts, to expand, and they have increased the cost of high-technology products to customers who need to buy on credit, such as small businesses. Additionally, the high interest rates have helped to increase the value of the dollar against most foreign currencies. Many of our firms export a significant portion of their production. Foreign currency translation has caused profits loss.

Because almost all high-tech products are very cost efficient, the appreciation of the dollar has not had a crippling effect. Major high-tech firms with financial reserves, foreign currency balance sheets and international experience may be unscathed. However, anything which weakens our firms' competitive position in relation to foreign competition, can't be considered a help, and may have a negative market-share effect when the Western European economy recovers.

Lastly, government at all levels is cutting back. Nationally, the Federal budget cuts will mean fewer Federal workers, largely the result of attrition. The cuts in the Federal budget will also cause lower funding, and fewer workers in some state and local government programs. Ironically, decreased Federal spending and deregulation may effect private sector industries such as noncommercial research, social services, legal services, and regulatory instruments production. In Massachusetts, the Federal cuts are compounded by Proposition 2½. Since many of our readers have received blow-by-blow accounts on the impact of Propostion 2½ from the media, we will not examine the details of the effect on municipal and state budgets. In terms of employment, the effect could be as much as 20,000 state and local government jobs, with ripple effects on employment in social services, consulting and public relations services, and noncommercial research services.

In summation, our employment projections could be too optimistic. We have forecast that nonagricultural wage and salary employment during FFY 1982 will average 2,731,000. It now appears that this may be about 10,000 too high. Nevertheless, we do not expect any major sectors except nondurable goods manufacturing and government to have lower employment levels in FFY 1982 than they did in FFY 1981.

Summarizing employment trends by Industry:

Durable Goods Manufacturing

Lumber (24) This industry should remain stable. The lack of new housing starts is only partially offset by larger exports. Greater numbers of new housing starts in 1982 will help. Improved technology and labor savings techniques will reduce the replacement need for some workers.

Furniture (25): A small increase is expected due to demand for office furniture.

Stone,Clay and Glass (32): Nationally, this industry is projected to grow. Locally, however, we expect employment will remain stable.

Primary Metals (33): The changes within this industry are important. There has been a steady change from the forging and rolling of ferrous metals to nonferrous metals. Employment in Primary Metals is greatly related to demand in the Fabricated Metals and Machinery Industries. Since we expect employment in those industries to expand, we are projecting an increase for Primary Metals as well.

Fabricated Metals (34): This industry will grow due to continued demand for parts by machinery industries. Firms such as Wyman-Gordon are expected to benefit from reindustrialization and national defense efforts.

Nonelectrical Machinery (35): The metal working machinery, special industrial machinery, and the general industrial machinery components within this industry are not expected to show significant growth next year. This should be offset, however, by continued strong demand for office and computing equipment. The continued strength of the export market for these machines is a critical variable. Another important factor for this industry is the increased long-term demand for engines due to higher defense outlays.

Electrical Machinery (36): Will continue to grow. Communications equipment and electronic components are the strength in this industry. Foreign competition in the development of advanced semiconductors and integrated circuits may be cause for concern. If export markets start to dry up this industry would be hurt. The sales of electronic equipment and systems to the U.S. Government, especially to the Defense Department will continue as a major factor in the growth of this industry.

Transportation Equipment (37): An overall decline is expected. Employment in the making of bicycles and mopeds is down. Increased defense expenditures should help the long-term prospects for aircraft,shipbuilding, and guided missiles. Automobile employment is expected to be stable next year because smaller cars are produced here, and because demand for automobiles is expected to gradually increase.

Instruments (38): Growth is expected next year as part of a nationwide expansion in this industry. The picture isn't totally favorable, however. Optical instruments employment has been declining. The long-term affects of decreased Federal regulations on industry, such as performance standards for commercial environments, may be fewer workers making measuring and controlling instruments. We are hoping for continued recovery in photographic equipment and supplies. Exports are critical.

Nondurable Goods Manufacturing

Food (20): Slight decrease in employment. This industry is being hurt by decreased demand for prepared food by the fast food outlets. Reduced air flight schedules will further diminish prepared food demand.

Textiles (22): A very slight decline. Companies which manufacture automobile upholstery and home furnishings have been hurt by the recession.

Apparel (23): No real change. Slight growth nationally.

Paper (26): A small decline in employment. This industry is both energy and capital intensive. To lower costs many plants have been largely automated, which means increased production but lower employment. The recycling of paper will probably be a growth sector of this industry for the next several years.

Printing and Publishing (27): Although this past year saw the closing of a greeting card factory, most of the employment decline for this industry has been, and in the future will be, attributable to automation. We believe that the industry remains basically healthy, but the long-range trend will be towards lower employment. It is possible that within the intermediate future that there will be mergers among newspaper publishers.

Chemicals (28): Employment is expected to go up by a few hundred workers. The current oil "glut" should help stabilize prices and employment in the plastics and synthetics subsector (SIC 282).

Rubber and Miscellaneous Plastics Products (30): The rubber part of this industry now accounts for only about a quarter of the employment. Rubber footwear is our only growth rubber sector. Miscellaneous plastics products should be fairly stable.

Leather (31): Virtually no change is expected. Although employment in shoe manufacture is down, some speciality shoe firms have been expanding. Speciality casual shoes such as Sperry Top-siders and Grasshoppers espadrilles have sold well as the "Preppy" look took hold of fashion.

Nonmanufacturing

Construction: A considerable growth in jobs is expected. Although the residential construction market will probably still be depressed, a great deal of nonresidential construction is already underway. In fact, Boston is experiencing what is described as a "boom" in commercial construction. Despite this summer's carpenters' strike, which halted most construction projects for several weeks, the short and the long-term employment prospects for this industry are very good.* Residential building activity may improve if interest rates come down next year. Barnstable County has experienced increased construction of retirement homes and second residences despite a generally depressed residential market.

Transportation and Utilities: We have forecast a small increase in jobs. This projection, however, may be optimistic due to recent events. The air traffic control problem will cause a major reduction in the number of flights offered by most airlines. With fewer planes flying, the airline companies will need fewer workers. This will cause quite a few layoffs immediately, and very little hiring for at least the next year. The air traffic controller's strike has highlighted the dependency of many of our firms on being able to air freight their products to distant markets. In addition, unprofitable routes are being phased out as a result of airline deregulation.

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* This assumes that MIFA loans and UDAG, and CDBG grants will continue to be a stimulis to commericial construction.

Communications employment presents a varying picture. The Bell System is automating wherever possible, so their employment will continue to go down due to attrition. Federal deregulation, however, may lead to more, smaller, companies in the telephone industry. Cable television will become increasingly important. Most of the state's large cities have cable TV, or are in the process of contracting for a cable television system. There will be increased employment in the installation and servicing of the cable hookups to private residences. Additionally, it is hoped that Boston will eventually become a production center for cable network programs. In addition, Satellite telecommunications systems are experiencing growth in the commercial market.

We do not expect large increases in oil, gas or electricity companies employment. Over the past several years, thousands of Bay State homeowners have changed from heating their homes with oil to heating with gas. We expect far fewer conversions next year. The natural gas shortage caused by the abnormally cold weather last winter has scared off many potential gas users. It also made gas companies hesitate to add large numbers of new customers at this time. Another factor is that the price differential between oil and natural gas has narrowed. The present surplus of oil on international markets has stabilized oil prices at least for a time, while natural gas prices have risen due to deregulation. Nevertheless, instability in the Middle East remains a variable in any employment projection.

Wholesale and Retail Trade: We expect that the number of jobs will increase by almost 3 percent. There will be two reasons for this. The first and most important is that in FFY'82 disposable income is expected to rise faster than the rate of inflation. That is, for the first time in several years consumers will have increased purchasing power. The other cause for increased employment will be that more of the jobs are now part-time. So it is possible to have the number of jobs increase with little or nc increase in the number of hours worked.

Finance, Insurance, and Real Estate: This sector's employment is increasing nationally. Local firms are expected to follow the same trend. The tax and Federal budget cuts Congress has voted for should help because they are intended to stimulate business activity and the accumulation of savings. The expected lower rates of inflation should make savings accounts and insurance policies more attractive. Lower interest rates will stimulate a sluggish housing market. Increased automation within banking and insurance will harness employment growth in unskilled clerical jobs.

Services: Services will continue to grow relatively faster than total employment, although not as fast as it has in past years. Business services, hospitals, industrial services, and auto repair services should all either grow or show stable job levels. Personal services will continue to slowly decline as it has for several years. Employment in hotels and motels was expected to do better than it has. This year we have not had as many tourists as expected. The air traffic controllers' strike will make things even worse in the short-run. Long-term, however, there will be large increases in hotel/motel employment due to the many hotels under construction in Boston. The interdependency between government and the service industry has not been tested in recent years. Health services, legal services, educational services, social services, and non-commercial educational, scientific and research organizations have experienced some growth in employment in the past due to either Federal grants or Federal regulatory requirements. Title XX of the Social Security Act budget reductions will reduce the amount of funds available for private sector "Service providers". Additional Federal, state, and local budget cuts may "trickle down" to reduction in employment in some service sectors.

Government: We have projected a loss of 11,200 jobs, or 2.8 percent. It appears we have underestimated the size of the decrease. The government budget cuts have been deeper, and will necessitate more layoffs, than we had expected when we made our projections at the end of May.

Federal: The hiring freeze ordered last last year by President Carter has already reduced the job rolls through attrition. The budget that Congress has passed for next year will necessitate further cuts. Post office employment will decline slightly because of increased automation. There will be fewer air traffic controllers. A positive note is that the New England and Northeast Federal Aeronautic Administration Regional offices are expected to be consolidated at the facility in Burlington. This consolidation will mean an addition of several hundred workers (mostly transfers from New York) which will partly offset losses in other agencies, if plans are not cancelled by the FAA.

State: It isn't certain as yet how many state workers will have to be laid off. We originally felt there would be a net loss of about 2,000 positions. The latest estimates are that there will be a reduction of 3,000 to 8,000 in staff.

Not all of this loss will be from layoffs, much will be through attrition. Also, these reductions are not totally the result of Proposition 2½, as is commonly supposed. Federal budget cutbacks will necessitate some of the decrease, particularly in the Division of Employment Security and the Department of Welfare.

Local: At first we felt that Proposition 2½ would mean a reduction in local government employment of 12,000 to 15,000, or about 5 percent. By July, however, we already had 14,000 municipal workers collecting unemployment benefits. Because of state reimbursements to cities and towns, some of these claimants will be back working at their old jobs in the Fall. Now that the state has announced how much increased aid it is giving local communities, many laid off police and firemen are being recalled. Because of the way their contracts were written, several hundred teachers who will be in the schools next Fall have been able to collect this summer. On the other hand, several thousand other teachers and municipal workers could be laid off over the next several months.

To sum up, we believe that government employment will be significantly lower than we had thought in May. Job levels could be: Federal - 55,500; state - 94,500; local - 233,500. The government total would then be 383,500 jobs, or about 10,000 lower than we had thought originally.

Employment in Massachusetts
Calendar Years 1971-1980
(in 000's)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Nonagricultural-Total	2224.2	2251.7	2333.5	2353.7	2273.1	2323.5	2416.0	2526.3	2603.5	2647.8
Manufacturing	600.2	610.2	634.7	639.3	577.8	593.6	621.0	652.1	672.1	673.1
Durables	305.7	314.8	339.9	354.7	318.9	325.8	352.3	378.9	401.1	409.7
Ordnance	16.8	1/	1/	1/	1/	1/	1/	1/	1/	1/
Lumber & Furniture	14.2	15.4	16.0	15.3	12.8	13.1	13.6	14.0	13.9	13.3
Stone, Clay & Glass	11.6	12.7	14.2	15.0	10.9	12.1	12.3	13.1	13.7	13.1
Primary Metals	17.1	14.0	16.2	17.3	15.5	16.1	16.9	17.1	17.6	17.3
Fabricated Metals	38.5	52.2	56.1	57.2	49.2	50.4	51.8	53.2	55.1	54.1
Nonelectrical Mach.	68.0	66.0	73.1	78.5	74.0	74.0	82.0	90.4	101.6	109.5
Electrical Machinery	84.6	81.6	88.1	93.7	82.8	83.8	91.0	98.2	104.6	109.4
Transportation Equip.	23.1	34.3	33.2	30.5	30.0	31.2	33.2	36.4	37.1	35.4
Instruments	31.3	38.6	43.0	47.2	43.7	45.1	51.5	56.5	57.5	57.6
Nondurables	295.0	295.4	294.8	284.6	258.9	267.8	268.7	273.2	271.0	263.4
Food & Kindred Prod.	36.0	33.1	31.5	30.4	28.6	29.5	29.1	28.5	28.2	27.3
Textile Mill Prod.	28.8	31.0	31.1	28.7	25.2	27.7	27.9	28.2	27.1	25.4
Apparel	46.9	45.9	45.8	44.2	41.1	43.2	42.8	42.1	40.7	39.8
Paper & Allied Prod.	32.7	32.2	33.2	32.6	27.9	28.9	29.4	30.4	29.8	28.9
Printing & Publishing	42.5	43.9	43.5	42.0	40.3	41.0	42.2	42.9	44.0	43.7
Chemicals	18.4	19.5	20.3	20.9	19.8	18.4	17.3	17.7	18.2	18.3
Rubber & Misc. Plastics	31.3	32.2	34.6	33.7	27.8	29.6	30.3	32.1	32.5	31.0
Leather & Leather Prod.	31.8	30.4	26.8	24.1	23.0	24.1	22.8	23.5	22.2	20.8
Other Nondurables	26.6	27.2	28.0	28.0	25.2	25.4	26.9	27.8	28.3	28.2
Nonmanufacturing	1624.0	1641.5	1698.8	1714.4	1695.3	1729.9	1795.0	1874.2	1931.4	1974.7
Construction	99.4	103.3	102.7	90.6	74.2	67.1	66.7	72.8	75.6	73.2
Transp., Comm., and Public Utilities	117.0	121.5	123.5	123.6	113.7	112.8	114.9	117.3	120.5	122.3
Wholesale & Retail Tr.	500.4	501.5	517.0	520.5	511.8	520.2	533.7	547.3	566.3	571.3
Fin., Ins., & Real Est.	130.2	128.8	133.7	136.9	135.8	137.8	143.2	146.7	150.4	159.0
Services, Mining & Misc.	446.4	443.3	470.3	488.5	494.7	516.2	528.6	560.9	601.9	638.6
Government	330.6	343.1	351.6	354.3	365.1	375.8	407.9	429.2	416.7	410.3
Federal	62.3	64.4	61.9	58.3	58.0	57.8	56.5	57.4	58.0	58.3
State	268.3	278.7	289.7	296.0	307.1	318.0	86.8	371.8	94.1	97.8
Local	2/	2/	2/	2/	2/	2/	264.6	2/	264.6	254.2

1/ SIC Code Change

2/ Local Government included in State Total

Source: Current Employment Series, ES-790.

Table 6B
Employment in Massachusetts - 1979-1981
(in 000's)

	Annual Average		January	February	March	April	May	June
	1979	1980	1981	1981	1981	1981	1981	1981
Nonagricultural Total	2603.5	2647.8	2609.6	2629.1	2652.3	2682.1	2691.6	2702.4
Manufacturing Total	672.1	673.1	663.8	666.8	667.3	671.7	670.9	679.7
Durable Goods Total	401.1	409.7	408.2	408.9	409.6	413.3	410.6	415.0
Lumber & Furniture	13.9	13.3	13.6	13.5	13.8	13.9	13.9	14.0
Stone, Clay & Glass	13.7	13.1	12.4	12.4	12.4	12.7	12.6	12.9
Primary Metals	17.6	17.3	16.7	16.9	17.0	17.0	16.9	17.1
Fabricated Metals	55.1	54.1	53.3	53.3	53.0	53.0	52.6	52.7
Nonelectrical Machinery	101.6	109.5	109.6	110.0	110.3	111.5	110.3	111.0
Electrical Machinery	104.6	109.4	109.7	110.3	110.7	112.2	111.1	113.1
Transportation Equip.	37.1	35.4	34.4	34.0	33.8	33.9	33.5	33.8
Instruments	57.5	57.6	58.5	58.5	58.6	59.7	59.7	60.4
Nondurables	271.0	263.4	255.6	257.9	257.7	258.4	260.3	264.7
Food & Kindred Prod.	28.2	27.3	26.0	26.0	25.8	26.0	26.6	26.8
Textile Mill Products	27.1	25.4	24.6	24.7	24.7	25.3	24.9	25.2
Apparel	40.7	39.8	39.1	39.7	39.7	39.7	40.2	40.5
Paper & Allied Prod.	29.8	28.9	28.5	28.7	28.6	28.5	28.4	28.9
Printing & Publishing	44.0	43.7	42.7	43.0	43.1	43.0	43.4	44.5
Chemicals	18.2	18.3	17.7	17.9	18.0	17.8	17.8	18.1
Rubber & Misc. Plastics	32.5	31.0	30.3	30.8	30.6	30.6	30.8	31.6
Leather & Leather Prod.	22.2	20.8	19.7	20.1	20.1	20.2	20.5	20.6
Other Nondurables	28.3	28.2	27.0	27.0	27.1	27.3	27.7	28.5
Nonmanufacturing	1931.4	1974.7	1945.8	1962.3	1985.0	2010.4	2020.7	2022.7
Construction	75.6	73.2	64.6	61.6	63.5	69.3	70.8	71.9
Transp., Comm.,Pub. Util.	120.5	122.3	123.2	123.6	124.1	124.5	125.0	126.9
Wholesale & Retail Tr.	566.3	571.3	566.9	560.1	564.3	576.2	583.4	590.8
Fin., Ins., & Real Est.	150.4	159.0	160.3	160.4	161.7	161.6	163.5	167.1
Services., Mining & Misc.	601.9	638.6	632.0	650.7	663.2	675.7	676.0	668.2
Government	416.7	410.3	398.8	405.9	408.2	403.1	402.0	397.8
Federal	58.0	58.3	57.2	57.8	57.7	57.8	57.9	57.4
State	94.1	97.8	94.5	98.9	100.5	99.5	99.3	95.3
Local	264.6	254.2	247.1	249.2	250.0	245.8	244.8	245.1

Source: Current Employment Series, ES-790

Source: Current Employment Series, ES-790

Table 7
Employment in Massachusetts - Calendar Years 1971-1980
Percent Distribution

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Nonagri. Wage & Salary Employment-Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Manufacturing	26.98	27.10	27.20	27.16	25.42	25.55	25.70	25.81	25.82	25.42
Durable Goods	13.72	13.98	14.57	15.07	14.03	14.02	14.58	15.00	15.41	15.47
Ordnance	0.76	1/	1/	1/	1/	1/	1/	1/	1/	1/
Lumber & Furniture	0.64	0.69	0.69	0.65	0.56	0.56	0.57	0.55	0.53	0.50
Stone, Clay & Glass	0.52	0.56	0.61	0.64	0.48	0.52	0.51	0.52	0.53	0.50
Primary Metals	0.77	0.62	0.69	0.74	0.68	0.69	0.70	0.68	0.68	0.65
Fabricated Metals	1.73	2.32	2.40	2.43	2.16	2.17	2.14	2.11	2.12	2.04
Nonelectrical Machinery	3.06	2.93	3.13	3.34	3.26	3.19	3.39	3.58	3.90	4.14
Electrical Machinery	3.80	3.62	3.78	3.98	3.64	3.61	3.77	3.89	4.02	4.13
Transportation Equipment	1.04	1.52	1.42	1.30	1.32	1.34	1.37	1.44	1.43	1.34
Instruments	1.41	1.71	1.84	2.01	1.92	1.94	2.13	2.24	2.21	2.18
Nondurables	13.26	13.12	12.63	12.09	11.39	11.53	11.12	10.81	10.41	9.95
Food & Kindred Products	1.62	1.47	1.35	1.29	1.26	1.27	1.20	1.13	1.08	1.03
Textile Mill Products	1.29	1.38	1.33	1.22	1.11	1.19	1.16	1.12	1.04	0.96
Apparel	2.11	2.04	1.96	1.88	1.81	1.86	1.77	1.67	1.56	1.50
Paper & Allied Products	1.47	1.43	1.42	1.39	1.23	1.24	1.22	1.20	1.15	1.09
Printing & Publishing	1.91	1.95	1.86	1.78	1.77	1.77	1.75	1.70	1.69	1.65
Chemicals	0.83	0.87	0.87	0.89	0.87	0.79	0.72	0.70	0.70	0.69
Rubber & Misc. Plastics	1.41	1.43	1.48	1.43	1.22	1.27	1.25	1.27	1.25	1.17
Leather & Leather Prod.	1.43	1.35	1.15	1.02	1.01	1.04	0.94	0.93	0.85	0.79
Other Nondurables	1.20	1.21	1.20	1.19	1.11	1.09	1.11	1.10	1.09	1.07
Nonmanufacturing	73.02	72.90	72.80	72.84	74.58	74.45	74.30	74.19	74.18	74.58
Construction	4.47	4.59	4.40	3.85	3.26	2.89	2.76	2.88	2.90	2.77
Trans., Comm., Pub. Util.	5.26	5.40	5.29	5.25	5.00	4.86	4.76	4.64	4.63	4.62
Wholesale & Retail Trade	22.50	22.27	22.16	22.11	22.52	22.39	22.09	21.66	21.75	21.58
Fin., Ins., & Real Est.	5.85	5.72	5.73	5.82	5.97	5.93	5.93	5.81	5.78	6.01
Services, Mining & Misc.	20.07	19.69	20.15	20.76	21.76	22.22	21.88	22.20	23.12	24.19
Government	14.86	15.24	15.07	15.05	16.06	16.17	16.88	16.99	16.00	15.50
Federal	2.80	2.86	2.65	2.48	2.55	2.49	2.34	2.27	2.23	2.20
State	12.06	12.38	12.42	12.58	13.51	13.69	3.59	14.72	3.61	3.70
Local	2/	2/	2/	2/	2/	2/	10.95	2/	10.16	9.60

1/ SIC Code Change

2/ Local Government included in State Total.

Table 8
Massachusetts Private Industrial Employment and Percent Distribution of Subsectors

		1976	1977	1978	1979	1980 1/
	Manufacturing	593,600	621,100	652,500	671,700	663,000
20	Food & Kindred Products	29,500	29,000	28,600	28,200	27,500
201	Meat Products	10.0%	9.3%	10.4%	10.9%	11.2%
202	Dairy Products	18.5	18.0	16.4	18.1	19.1
203	Preserved Fruits & Vegetables	5.1	5.9	6.8	5.2	5.7
204	Grain Mill Products	1.8	1.8	2.3	1.8	1.7
205	Bakery Products	23.1	21.4	20.0	19.3	17.6
206	Sugar & Confectionary Prod.	13.1	14.6	13.5	13.8	13.8
207	Fats and Oil	1.2	1.2	1.2	1.2	1.1
208	Beverages	10.3	10.3	10.0	9.0	9.3
209	Misc. Food & Kindred Prod.	17.0	17.5	19.5	20.6	20.5
22	Textile Mill Products	27,700	27,900	28,200	26,300	23,100
221	Weaving Mills, Cotton	1.5%	1.6%	1.7%	1.1%	1.5%
222	Weaving Mills, Synthetics	11.6	13.0	14.2	15.6	13.2
223	Weaving Mill, Wool	8.3	8.6	8.7	8.8	7.6
224	Narrow Fabric Mills	6.1	4.9	5.1	5.4	5.4
225	Knitting Mills	20.0	21.7	22.7	23.4	20.2
226	Textile Furnishings, exc. Wool	23.0	21.4	21.6	19.7	21.3
227	Floor Covering Mills	0.4	0.4	0.4	0.5	0.5
228	Yarn and Thread Mills	7.7	8.0	7.4	7.2	7.6
229	Misc. Textile Goods	21.5	20.2	18.1	18.3	22.7
23	Apparel	43,200	42,800	42,100	40,700	39,300
231	Men's & Boys' Suits and Coats	10.2%	11.8%	10.9%	11.3%	11.1%
232	Men's & Boys' Furnishings	11.9	11.2	11.8	11.3	11.3
233	Women's & Misses' Outerwear	41.0	41.7	41.7	43.5	44.4
234	Women's & Misses' Undergarments	7.0	7.4	7.3	7.2	7.4
235	Hats, Caps, & Millinery	1.1	1.0	0.8	0.7	0.7
236	Children's Outerwear	3.4	3.1	2.9	1.9	1.6
238	Misc. Apparel & Access.	7.1	7.1	7.2	7.3	6.9
239	Misc. Fabricated Textiles	18.2	16.8	17.5	16.8	16.5
24	Lumber & Wood Products	4,900	5,200	5,400	5,400	5,100
241	Logging Camps	1.1%	0.9%	1.8%	1.8%	1.9%
242	Sawmills & Planning Mills	13.8	12.5	13.3	15.1	14.6
243	Millwork, Plywood & Rel.	26.0	24.4	24.9	26.4	29.0
244	Wood Containers	13.8	13.0	12.1	12.6	11.9
245	Wood Building & Mobile Homes	4.8	4.6	4.3	2.7	2.8
249	Misc. Wood Products	40.5	44.6	43.5	41.3	39.8

Table 8
Massachusetts Private Industrial Employment
and
Percent Distribution of Subsectors
(continued)

		1976	1977	1978	1979	1980 1/
25	Furniture & Fixtures	8,200	8,400	8,700	8,400	7,800
251	Household Furniture	80.7%	79.7%	75.9%	71.9%	66.1%
252	Office Furniture	0.5	0.7	5.7	8.4	10.8
253	Public Building Furniture	2.4	2.3	2.5	2.5	3.3
254	Partitions & Fixture	13.8	14.4	13.7	14.2	16.6
259	Misc. Furniture Fixtures	2.6	2.7	2.3	3.1	3.3
26	Paper & Allied Products	28,900	29,400	30,400	29,800	27,300
262	Paperboard Mills, exc. Bldg. Paper	22.4%	21.4%	21.5%	20.7%	20.4%
263	Paperboard Mills	4.3	4.3	4.3	4.3	4.0
264	Misc. Converted Paper Prod.	42.9	43.9	44.7	45.2	45.9
265	Paperboard Containers & Boxes	30.3	30.2	28.9	29.2	29.2
266	Building Paper & Board Mills	2/	2/	0.6	0.6	0.4
27	Printing, Publishing and Allied Products	41,000	42,200	42,900	43,000	43,400
271	Newspapers	31.7%	31.5%	31.3%	30.7%	30.2%
272	Periodicals	3.3	3.6	4.1	3.7	3.6
273	Books	14.9	13.4	12.8	13.9	13.7
274	Misc. Publishing	1.9	2.0	1.9	1.6	1.9
275	Commercial Printing	30.2	31.2	31.3	32.3	33.0
276	Manifold Business Forms	1.2	1.4	1.4	1.5	1.4
277	Greeting Cards	3.1	3.4	3.1	2.5	2.5
278	Blankbooks and Bookbinding	11.1	11.2	12.0	11.6	11.4
279	Printing Trade Services	2.6	2.4	2.1	2.3	2.3
28	Chemicals & Allied Products	18,400	17,300	17,700	18,200	17,700
281	Indust. Inorganic Chemicals	6.4%	5.6%	7.0%	5.6%	5.6%
282	Plastic Materials & Synthetics	31.8	32.8	30.8	30.9	31.2
283	Drugs	11.3	11.9	12.9	14.8	15.1
284	Soap, Cleaners & Toilet Goods	18.3	17.9	17.3	16.3	14.8
285	Paints & Allied Products	7.0	6.6	7.1	7.2	7.9
286	Indust. Organic Chemicals	2.7	2.8	3.1	2.9	3.1
287	Agricultural Chemicals	2.1	2.1	2.2	2.2	2.1
289	Misc. Chemical Products	20.4	20.1	19.6	20.0	20.3

Table 8
Massachusetts Private Industrial Employment
and
Percent Distribution of Subsectors

(continued)

		1976	1977	1978	1979	1980 1/
30	Rubber & Misc. Plastic Prod.	29,600	30,200	32,100	31,700	29,400
301	Tires & Inner Tires	6.6%	7.8%	7.1%	6.0%	3.2%
302	Rubber & Plastic Footwear	7.2	3.0	2.1	3.6	3.0
306	Fab. Rubber Prod. n.e.c.	23.0	22.1	22.0	23.2	19.8
307	Misc. Plastic Products	63.1	67.3	68.7	66.9	72.0
32	Stone, Clay and Glass Prod.	11,200	11,300	13,200	13,900	13,400
321	Flat Glass	0.3%	0.5%	0.6%	0.5%	0.5%
322	Glass & Glassware, Pressed or Blown	10.1	11.3	10.9	10.1	9.0
323	Products of Purchased Glass	3.0	2.9	2.6	2.5	2.4
325	Structural Clay Products	1.7	1.2	1.0	1.4	1.5
327	Concrete Gypsum and Plastic Products	22.3	20.8	21.2	21.3	23.1
328	Cut Stone & Stone Products	4.8	4.5	3.7	2.5	2.9
329	Misc. Nonmetallic Mineral Prod.	55.4	56.6	58.4	60.3	59.0
33	Primary Metal Industries	13,400	14,400	17,000	17,500	16,800
331	Blast Furnace & Basic Steel Products	24.0%	20.8%	15.9%	15.7%	15.3%
332	Iron & Steel Foundaries	15.1	13.4	11.5	11.1	11.8
333	Primary Nonferrous Metals	3.5	2.6	2.1	2.1	2.5
334	Secondary Nonferrous Metals	2.2	2.0	1.7	1.4	1.9
335	Nonferrous Rolling & Drawing	41.1	43.0	53.6	52.6	50.1
336	Nonferrous Foundries	9.0	11.1	10.7	12.5	12.9
339	Misc. Primary Metal Products	4.7	7.1	4.6	4.6	5.5
34	Fabricated Metal Products	50,400	51,800	53,200	54,300	52,200
341	Metal Cans & Containers	2.0%	2.3%	2.0%	2.1%	2.1%
342	Cutlery, Hand Tools, & Hdwre.	25.4	25.6	25.1	23.8	22.6
343	Plumbing & Heating, Nonelec.	2.4	2.2	2.5	2.6	3.0
344	Structural Metal Products	18.2	17.2	17.6	17.3	18.0
345	Screw Machine Prod., Bolts	7.4	7.4	7.2	7.3	6.6
346	Metal Forgings & Stampings	11.4	11.4	11.4	12.1	12.2
347	Metal Services n.e.c.	7.7	7.7	7.5	8.0	7.8
348	Ordnance & Accessories	9.1	9.5	9.2	9.3	10.6
349	Misc. Fabricated Metal Prod.	16.4	16.7	17.5	17.5	17.2

Table 8
Massachusetts Private Industrial Employment
and
Percent Distribution of Subsectors
(continued)

		1976	1977	1978	1979	1980 1/
35	Machinery, Except Electrical	74,000	82,000	90,400	103,000	108,400
351	Engines and Turbines	8.9%	7.5%	6.6%	5.7%	5.9%
352	Farm Machinery	2/	2/	2/	2/	2/
353	Construction & Rel. Machinery	1.4	1.2	1.1	1.1	0.9
354	Metal Working Machinery	19.6	19.4	18.6	17.7	16.9
355	Special Industrial Mach.	20.7	19.0	18.8	17.3	15.2
356	Gen. Industrial Machinery	10.2	9.9	9.8	8.9	8.6
357	Office, Computing & Accounting	28.9	33.0	34.8	38.5	42.3
358	Service Industry Machinery	2.6	2.7	2.6	2.5	2.3
359	Misc. Machinery exc. elec.	7.6	7.0	7.6	8.4	7.9
36	Electric & Electronic Equip.	83,800	91,000	98,300	104,100	111,700
361	Elec. Dist. Equipment	15.0%	13.1%	6.1%	5.4%	4.9%
362	Elec. Indust. Apparatus	2.9	2.9	5.9	6.0	4.8
363	Household Appliances	1.6	1.4	1.3	1.4	1.1
364	Elec. Lighting & Wiring Equip.	9.8	10.1	10.3	10.0	7.1
365	Radio & TV Receiving Equip.	4.1	4.0	4.1	2.8	2.4
366	Communications Equipment	28.7	26.7	27.7	28.3	30.5
367	Elec. Components & Access.	34.2	37.8	39.9	43.0	44.0
369	Misc. Elec. Equip. & Supplies	3.7	4.0	4.7	5.1	5.2
37	Transportation Equipment	30,200	33,200	36,400	37,000	34,200
371	Motor Vehicles Equipment	14.7%	16.7%	17.3%	17.0%	16.1%
372	Aircraft and Parts	25.3	25.4	25.1	27.6	31.4
373	Ship & Boat Building	21.4	19.9	22.0	20.6	17.0
376	Guided Missiles & Space	36.2	35.6	33.4	32.7	34.0
379	Misc. Transportation Equip.	0.6	0.5	0.4	0.3	0.4
38	Measuring & Controlling Instruments	45,100	51,500	56,700	57,800	56,700
381	Engineering & Scientific Inst.	4.1%	5.7%	5.5%	5.7%	7.1%
382	Measuring & Contr. Inst.	31.8	32.1	30.9	31.4	35.6
383	Optical Instr. & Lenses	10.6	10.3	9.9	10.9	10.9
384	Med. Instr. & Supplies	10.1	10.5	11.8	11.2	11.4
385	Opthalmic Goods	12.9	11.8	10.8	12.2	10.2
386	Photographic Equipment and Supplies	27.0	26.1	28.5	26.3	22.6
387	Watches, Clocks, & Watch Cases	3.6	3.4	2.6	2.4	2.1

Table 8
Massachusetts Private Industrial Employment
and
Percent Distribution of Subsectors

(continued)

		1976	1977	1978	1979	1980 1/
	Misc. Manufacturing	25,400	26,900	27,800	28,800	28,300
21	Tobacco Manufacturing	0.3%	0.1%	2/	2/	2/
29	Petroleum Refining	4.8	5.3	5.3	6.0	5.6
30	Manufacturing Ind. n.e.c.	94.9	94.6	94.6	94.0	94.4
	Construction	71,700	66,400	72,700	77,200	83,000
15	Building Construction	24.5%	25.7%	28.7%	28.0%	27.9%
16	General Construction	18.3	18.0	11.9	10.9	10.7
17	Special Trade Contractors	57.3	57.2	59.5	61.1	61.4
	Transportation and Public Utilities	112,800	114,900	117,300	115,500	114,800
41	Passenger Transit	13.8%	13.5%	13.6%	13.7%	11.6%
42	Trucking & Warehousing	23.8	24.4	24.9	24.3	23.2
44	Water Transportation	2.0	2.3	2.2	2.0	2.5
45	Air Transportation	7.0	7.3	7.6	8.4	8.8
47	Transportation Services	3.7	3.8	4.0	4.5	4.7
48	Communications	32.5	32.0	31.5	31.4	33.0
49	Electric, Gas & Sanitary Svc.	17.2	16.8	16.3	15.7	16.3
	Wholesale & Retail Trade	520,200	533,500	547,100	567,400	575,600
50	Wholesale - Durable Goods	11.7%	12.0%	11.6%	12.0%	12.2%
51	Wholesale Nondurable Goods	10.8	10.5	10.3	10.6	10.8
52	Building Materials, Hardware Mobile Homes	2.4	2.4	2.3	2.4	2.4
53	General Merchandise	10.8	10.6	10.7	10.2	9.7
54	Food Stores	14.7	14.4	13.8	13.5	13.0
55	Automotive Dealers & Gas Stations	8.0	8.0	7.9	7.3	6.8
56	Apparel & Access. Stores	5.5	5.4	5.7	5.8	5.8
57	Furniture & Home Furnishings	2.9	2.7	2.9	2.7	2.6
58	Eating & Drinking Places	22.4	23.0	23.8	24.3	25.6
59	Miscellaneous Retail	10.8	10.8	11.2	11.2	11.2

1/ Distribution based on September, 1980

2/ Percent was less than 0.0

Source: Current Employment Series DES, ES-202

Table 9
Production Employment as Percent Of Manufacturing Employment
Massachusetts
April 1981

Industry Title	All Employees (000's)	Production Workers (000's)	Production As Percent Of Total Industry Employment	Percent Change In Employment Over the Year
Manufacturing - Total	671.7	442.1	65.8	- 1.8
Durable Goods - Total	413.3	254.2	61.5	- 0.5
Lumber & Furniture	13.9	10.8	77.7	+ 2.2
Stone, Clay & Glass	12.7	8.2	64.5	- 4.5
Primary Metals	17.0	13.4	78.8	- 6.6
Fabricated Metals	53.0	37.6	70.9	- 4.2
Cutlery, Hand Tools	12.8	8.6	67.2	- 1.5
Other Fabricated	40.2	--	--	--
Machinery exc. Electrical	111.5	65.1	58.4	+ 1.5
Metalwork Machinery	16.9	12.4	73.4	- 6.6
Spec. Ind. Machinery	15.8	9.1	57.6	- 8.7
Office & Computing Mach.	50.4	24.4	48.4	+10.3
Other Mach., exc. elec.	28.4	--	--	--
Electric & Electronic Equip.	112.2	66.5	59.3	+ 0.9
Communications Equip.	34.5	16.6	48.1	+ 8.5
Electronics Components	48.9	29.6	60.5	+ 0.2
Other Elec. Equip.& Supply	28.8	--	--	- 5.9
Transportation Equipment	33.9	18.6	54.9	- 6.6
Instruments	59.1	34.0	57.5	+ 2.4
Measuring & Control	20.1	11.7	58.2	+ 5.2
Other Ind. & Related	39.0	--	--	+ 1.0
Nondurable Goods-Total	258.4	187.9	72.7	- 3.9
Food & Kindred Products	26.0	15.8	60.8	- 2.3
Textile Mill Products	25.3	19.9	78.6	- 6.7
Apparel	39.7	35.3	88.9	- 1.0
Men's & Boys' Suits	8.9	4.2	47.2	- 2.2
Misc. Fabricated	6.3	5.2	82.5	- 8.7
Other Apparel & Textiles	24.5	--	--	+ 1.7
Paper and Allied Products	28.5	20.7	72.6	- 3.4
Paper Mills exc. Bldg.	6.1	--	--	- 1.6
Paperboard Containers	8.1	6.3	77.8	- 2.4
Other Paper & Allied Prod.	14.3	--	--	--
Printing and Publishing	43.0	26.0	60.7	- 3.2
Chemicals	17.8	10.3	57.9	- 3.8
Rubber & Misc. Products	30.6	23.6	77.1	- 3.2
Misc. Plastics Products	21.8	17.1	78.4	- 3.5
Other Rubber & Plastics	8.8	--	--	-10.2
Leather & Leather Products	20.2	16.5	81.7	- 7.8
Footwear exc. Rubber	11.5	9.2	80.0	-11.5
Miscellaneous Manufacturing	26.1	18.0	68.9	- 4.0
Jewelry	8.7	6.2	71.3	- 3.3

Source: BLS 790

Table 10
Massachusetts Projected Employment By Industry
Federal Fiscal Years 1980-1982 1/

May 1981

(in 000's)

Industry	FFY 1980	FFY 1981 2/	FFY 1982 3/
Nonagricultural Wage & Salary Employment-Total	2642.2	2679.1	2731.1
Manufacturing	675.7	669.1	681.6
Durable Goods	409.5	410.8	425.1
Lumber	5.1	5.1	5.1
Furniture	8.3	8.7	8.8
Stone, Clay, Glass	13.3	12.8	12.8
Primary Metals	17.5	16.8	17.5
Fabricated Metals	54.6	53.1	54.1
Nonelectrical Machinery	108.3	110.9	115.1
Electrical Machinery	108.9	111.2	118.1
Transportation Equip.	35.9	33.4	32.5
Instruments	57.5	58.9	61.1
Nondurable Goods	266.2	258.3	256.5
Food	27.7	26.8	26.6
Textiles	25.9	24.6	24.2
Apparel	39.8	39.8	39.9
Paper	29.2	28.4	28.2
Printing	44.1	43.1	42.3
Chemicals	18.3	17.9	18.2
Rubber	31.5	30.1	29.5
Leather	21.2	20.0	19.9
Other Nondurables	28.4	27.6	27.7
Nonmanufacturing	1966.6	2009.9	2049.5
Construction	74.8	74.3	81.7
Transportation and Utilities	122.0	124.8	125.2
Wholesale and Retail Tr.	570.7	579.2	594.0
Finance, Insurance and Real Estate	157.6	162.5	165.4

Table 10
Massachusetts Projected Employment
By Industry
Federal Fiscal Years 1980-1982 1/
May 1981
(in 000's)
(continued)

Industry	FFY 1980	FFY 1981 2/	FFY 1982 3/
Nonmanufacturing (continued)			
Services and Misc.	629.2	664.8	690.1
Government	412.3	404.3	393.1
Federal	58.5	57.5	56.0
State	97.3	98.6	96.6
Local	256.5	248.2	240.5

1/ Some data may not add due to rounding.
A Federal Fiscal Year begins on October 1st and ends the following September 30th.

2/ Projection based on actual data for seven months and estimated for five months.

3/ Projected.

Sources: Current Employment Series of the Massachusetts Division of Employment Security in cooperation with the U. S. Department of Labor, Bureau of Labor Statistics. Massachusetts Economic Policy Analysis (MEPA) Model Forecast by George Treyz and Roy Williams.

Labor Area Research Department, DES.

Table 11
Manufacturing Employment in Massachusetts As a Percent of U.S. Employment Federal Fiscal Years 1980-1982 1/

	FFY 1980	FFY 1981 2/	FFY 1982 3/
Manufacturing (SIC Codes in Parentheses)	3.29	3.28	3.30
Durable Goods	3.31	3.36	3.41
Lumber (24)	0.72	0.74	0.72
Furniture (25)	1.73	1.80	1.80
Stone, Clay, Glass (32)	1.96	1.94	1.95
Primary Metals (33)	1.51	1.49	1.53
Fabricated Metals (34)	3.30	3.27	3.23
Nonelectrical Machinery (35)	4.36	4.43	4.49
Engines & Turbines(351)	4.58	4.80	4.84
Metalworking Mach.(354)	4.77	4.52	4.38
Special Industry Mach. (355)	8.21	7.58	7.36
General Indust. Mach. (356)	2.93	2.71	2.63
Office & Comp. Mach.(357)	10.58	10.99	11.59
Rest of Industry Group	1.23	1.28	1.34
Electrical Machinery (36)	5.10	5.15	5.36
Electronic Comp. (367)	8.51	8.57	8.89
Rest of Industry Group	3.91	3.95	4.03
Transportation Equip.(37)	1.86	1.79	1.75
Motor Vehicles and Parts (371)	0.80	0.74	0.77
Aircraft and Parts(372)	1.57	1.49	1.45
Rest of Industry Group	4.12	4.10	4.02
Instruments (38)	8.23	8.41	8.71
Measuring and Controlling (382)	7.96	8.43	8.74
Rest of Industry Group	8.37	8.40	8.70

Table 11
Manufacturing Employment in Massachusetts As a Percent of U.S. Employment Federal Fiscal Years 1980-1982 1/
(continued)

	FFY 1980	FFY 1981 2/	FFY 1982 3/
Nondurables	3.25	3.16	3.12
Food (20)	1.63	1.59	1.58
Textiles (22)	2.97	2.87	2.82
Apparel (23)	3.06	3.05	3.00
Paper (26)	4.18	4.09	4.03
Printing (27)	3.48	3.34	3.28
Chemicals (28)	1.64	1.61	1.61
Rubber (30)	4.36	4.21	4.20
Leather (31)	8.79	8.27	8.11
Other Nondurables	6.61	6.61	6.50

1/ A Federal Fiscal Year begins on October 1st and ends the following September 30th.

2/ Based on actual data for seven months and estimated for five months.

3/ Projected.

Source: Massachusetts Economic Policy Analysis (MEPA) Model Forecast by George Treyz and Roy Williams

IV. Employment Developments and Outlook by Occupation

A. Employment Trends

This section contains information on the occupations of employed persons and the distribution of occupations by age and sex. For the last several years, the Bureau of Labor Statistics has provided Massachusetts with an estimated annual occupational profile of the state's work force. Unfortunately, this profile is subject to considerable sampling error due to the size of the survey. The Current Population Survey (CPS) has a sample of approximately 1,600 households in Massachusetts. This number is not large enough to compensate for the fluctuations in statistical accuracy when the sample total is broken out into its component parts. Nevertheless, the CPS occupational profile does provide useful information on changes in the composition of the state's employment.

Table 12 provides data on the 1978, and 1980 employed in Massachusetts by their occupational category for 1976, and 1980. The table illustrates that the majority of women have white collar jobs, although their distribution in this sector is uneven. Women are well represented in professional and technical positions, but they are only one-quarter of the managers and administrators and compose three-quarters of the clerks. The only blue collar occupation in which women are a significant segment is as operatives, whereas women hold over half the service jobs.

Employed youth (16-19) are rather evenly distributed among the occupations. However, because young people lack experience, and in many cases job training as well, they tend to occupy the lower paid entry positions in each category.

An occupational distribution of employed persons in Massachusetts and the United States is in Table 14. A quick observation shows that women are more active in the labor force here than nationally, and that we have proportionally fewer minorities. The data also points out that women in Massachusetts occupy a greater percentage of the white collar jobs than their counterparts nationally. Also women in Massachusetts are more likely to have a blue collar job in a craft or operative occupation than women nationally.

The state's occupational distribution of female workers generally follows national trends for sales workers, clerical workers, and service workers.

Table 12
Massachusetts Employed Persons 1980, 1978, 1976
16+ By Occupation
(in 000's)

Occupation	Both Sexes			Male			Female			Youth 16-19 Both Sexes		
	1980	1978	1976	1980	1978	1976	1980	1978	1976	1980	1978	1980
TOTAL	2731.0	2663.0	2499.0	1538.0	1522.0	1472.0	1193.0	1141.0	1028.0	234.0	244.0	234.0
White Collar Workers	1506.0	1441.0	1337.0	711.0	704.0	662.0	796.0	737.0	675.0	NA	83.0	78.0
Prof., & Tech. Wkrs.	511.0	488.0	462.0	283.0	274.0	261.0	228.0	214.0	201.0	--	7.0	7.0
Managers & Admintrs.	315.0	278.0	252.0	225.0	224.0	206.0	91.0	54.0	46.0	--	3.0	3.0
Sales Workers	161.0	159.0	149.0	91.0	91.0	88.0	70.0	68.0	61.0	--	24.0	24.0
Clerical Workers	519.0	516.0	474.0	112.0	115.0	107.0	406.0	401.0	367.0	--	51.0	45.0
Blue Collar Workers	837.0	838.0	799.0	644.0	638.0	626.0	193.0	199.0	173.0	NA	86.0	78.0
Craft & Kindred Wkrs.	326.0	308.0	314.0	305.0	289.0	301.0	21.0	19.0	13.0	--	17.0	11.0
Operatives ex. Transp.	329.0	339.0	310.0	172.0	177.0	169.0	156.0	161.0	140.0	--	36.0	30.0
Transportation Equip.	75.0	82.0	64.0	69.0	75.0	60.0	5.0	7.0	4.0	--	3.0	4.0
Nonfarm Laborers	107.0	109.0	111.0	97.0	97.0	96.0	10.0	12.0	15.0	--	27.0	32.0
Service Workers	380.0	375.0	352.0	178.0	172.0	175.0	202.0	203.0	177.0	NA	73.0	76.0
Private Households	--	15.0	22.0	--	1.0	1.0	--	14.0	21.0	--	4.0	11.0
Other Services	--	359.0	330.0	--	172.0	174.0	--	188.0	156.0	--	69.0	64.0
Farm Workers	8.0	10.0	11.0	5.0	7.0	9.0	4.0	2.0	2.0	NA	1.0	2.0
Farmers & Managers	--	3.0	3.0	--	2.0	2.0	--	1.0	0.0	--	0.0	0.0
Farm Laborers & Supvs.	--	7.0	8.0	--	5.0	6.0	--	2.0	2.0	--	1.0	2.0

Source: 1978 and 1976 Geographic Profile of Employment and Unemployment - U. S. Dept. of Labor, Bureau of Labor Stat.
1980 data is from the draft copy of the same report
Numbers do not add due to rounding

Table 13
Occupational Distribution of Employment
Massachusetts Annual Averages
1975-1980
(in Percents)

	Both Sexes						Males					
	1980	1979	1978	1977	1976	1975	1980	1979	1978	1977	1976	1975
TOTAL ALL WORKERS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total White Collar Workers	55.1	55.0	54.1	53.0	53.0	55.3	46.2	46.3	46.2	44.5	45.0	47.2
Professional & Technical	18.7	18.2	18.3	18.4	18.5	19.2	18.4	18.2	18.0	17.2	17.7	19.0
Managers & Administrators	11.5	11.0	10.4	9.9	10.1	9.9	14.6	14.5	14.7	14.0	14.0	14.1
Sales Workers	5.9	6.0	6.0	5.9	6.0	6.7	5.9	5.8	6.0	6.0	6.0	6.8
Clerical Workers	19.0	19.8	19.4	18.9	19.0	19.5	7.3	7.8	7.6	7.3	7.3	7.3
Total Blue Collar Workers	30.6	30.4	31.5	32.5	32.0	30.2	41.9	41.8	41.9	44.0	42.5	41.5
Craft & Kindred Workers	11.9	12.2	11.6	12.0	12.6	12.8	19.8	20.5	19.0	19.9	20.4	20.9
Operatives exc. Transp.	12.0	11.9	12.7	12.9	12.4	11.2	11.2	11.2	11.7	12.2	11.5	10.6
Transportation Operatives	2.7	2.8	3.1	3.2	2.6	2.6	4.5	4.5	4.9	5.0	4.1	4.2
Nonfarm Laborers	3.9	3.6	4.1	4.5	4.4	3.6	6.3	5.6	6.4	6.8	6.5	5.7
Service Workers	13.9	14.2	14.1	14.1	14.1	14.2	11.6	11.3	11.3	11.1	11.9	10.9
Farm Workers	0.3	NA	0.4	NA	NA	0.3	0.3	NA	0.5	NA	NA	0.5

Source: 1979, 1978,1977, 1976, 1975 Geographic Profile of Employment and Unemployment
U. S. Department of Labor, Bureau of Labor Statistics
1980 data is from the draft copy of the same report

Table 14

Occupational Distribution - Massachusetts and United States
1978-EEO-1 Report Summaries
For Massachusetts and United States*

Race and Sex	Total Employment		White Collar											
			Total		Officials and Managers		Professionals		Technicians		Sales Workers		Clerical	
	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.
TOTAL BOTH SEXES	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Males	56.2	60.0	50.0	50.8	81.5	82.7	62.1	66.1	59.8	62.5	48.3	49.3	17.4	17.8
Total Females	43.8	40.0	50.0	49.2	18.5	17.3	37.9	33.9	40.2	37.5	51.7	50.7	82.6	82.2
White Total	92.0	82.1	94.5	88.2	96.3	93.1	95.2	90.8	92.9	86.2	94.5	88.5	93.4	84.0
White Males	51.9	49.9	47.5	46.1	78.8	77.6	59.0	60.9	55.9	55.4	45.4	44.2	16.1	14.6
White Females	40.2	32.2	47.0	42.1	17.6	15.5	36.2	29.9	37.0	30.7	49.1	44.3	77.2	69.4
Minority Total	8.0	17.9	5.5	11.8	3.7	6.9	4.8	9.2	7.1	13.8	5.5	11.5	6.6	16.0
Minority Males	4.3	10.1	2.6	4.7	2.8	5.1	3.1	5.2	4.0	7.1	2.9	5.0	1.3	3.2
Minority Females	3.7	7.8	2.9	7.0	0.9	1.8	1.8	4.0	3.2	6.7	2.6	6.4	5.3	12.8
Black Total	4.7	11.2	3.4	6.8	2.1	3.7	2.3	4.0	4.4	8.2	3.3	6.8	4.8	10.1
Black Males	2.3	6.1	1.4	2.4	1.5	2.6	1.3	1.9	2.3	3.5	1.6	2.8	0.9	1.9
Black Females	2.3	5.1	2.1	4.4	0.6	1.1	1.0	2.1	2.1	4.7	1.7	4.0	4.0	8.2
Spanish Surnamed Americans Total	2.5	5.0	1.1	3.1	1.0	2.0	0.7	1.8	1.2	3.3	1.6	3.4	1.1	4.1
Spanish Surnamed American Males	1.5	3.1	0.6	1.4	0.8	1.6	0.5	1.2	0.7	2.1	1.0	1.6	0.3	0.9
Spanish Surnamed American Females	1.0	1.9	0.5	1.7	0.2	0.5	0.2	0.6	0.5	1.2	0.6	1.8	0.8	3.2
Oriental & Pacific Islanders Total	0.7	1.3	0.9	1.6	0.4	0.8	1.7	3.2	1.4	2.0	0.4	0.9	0.6	1.5
Oriental & Pacific Islander Males	0.4	0.7	0.5	0.8	0.3	0.6	1.2	2.0	0.9	1.2	0.2	0.5	0.1	0.4
Oriental & Pacific Islander Females	0.3	0.6	0.4	0.8	0.1	0.2	0.5	1.2	0.6	0.8	0.2	0.4	0.5	1.1
American Indians Total	0.1	0.4	0.1	0.3	0.2	0.4	0.1	0.2	0.1	0.4	0.1	0.3	0.1	0.4
American Indian Males	0.1	0.3	0.1	0.2	0.1	0.3	0.1	0.2	0.1	0.2	0.1	0.2	**	0.1
American Indian Females	**	0.1	**	0.2	**	0.1	**	0.1	**	0.1	**	0.1	0.1	0.3

Table 14

Occupational Distribution - Massachusetts and United States
1978-EEO-1 Report Summaries
For Massachusetts and United States*
(continued)

	Blue Collar									
	Total		Craft Workers		Operatives		Laborers		Service Workers	
Race and Sex	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.
TOTAL - BOTH SEXES..........	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Males.................	69.6	74.7	85.9	91.4	63.4	68.1	57.9	66.1	45.7	45.4
Total Females...............	30.4	25.3	14.1	8.6	36.6	31.9	42.1	33.9	54.3	54.6
White Total.....................	89.9	77.5	93.9	86.2	88.7	76.1	86.2	68.2	85.3	69.4
White Males....................	63.3	59.0	81.1	79.5	56.6	52.6	50.1	44.7	38.5	30.4
White Females..................	26.6	18.5	12.8	6.7	32.1	23.5	36.1	23.5	46.8	38.9
Minority Total..................	10.1	22.5	6.1	13.8	11.3	23.9	13.8	31.8	14.7	30.6
Minority Males.................	6.3	15.6	4.8	11.8	6.8	15.5	7.9	21.3	7.2	15.0
Minority Females...............	3.8	6.9	1.3	1.9	4.5	8.4	5.9	10.4	7.5	15.7
Black Total	5.1	14.3	3.3	8.0	5.7	16.1	6.6	19.1	10.3	21.5
Black Males.....................	3.2	9.9	2.7	6.9	3.4	10.5	3.6	12.8	4.8	9.8
Black Females...................	1.8	4.4	0.5	1.1	2.3	5.7	3.0	6.3	5.5	11.7
Spanish Surnamed Americans.......	4.5	6.9	2.5	4.7	5.0	6.5	6.6	11.1	3.4	7.0
Sp. Surnamed Americans Male...	2.8	4.9	1.8	4.1	3.1	4.3	4.0	7.6	1.9	4.1
Sp. Surnamed Americans Female..	1.7	2.0	0.7	0.6	1.9	2.2	2.6	3.5	1.5	2.9
Oriental & Pacific Islander Total .	0.4	0.8	0.2	0.6	0.5	0.8	0.4	1.0	0.8	1.7
Oriental & Pacific Islander Males	0.2	0.4	0.2	0.5	0.2	0.4	0.2	0.5	0.4	0.8
Oriental & Pacific Islander Females	0.2	0.3	0.1	0.1	0.3	0.4	0.3	0.5	0.4	0.9
American Indian Total	0.1	0.5	0.1	0.5	0.1	0.5	0.2	0.6	0.2	0.4
American Indian Males..........	0.1	0.4	0.1	0.4	0.1	0.3	0.1	0.4	0.1	0.2
American Indian Females........	**	0.1	**	**	**	0.1	0.1	0.2	0.1	0.2

* Private Employers with at least 100 employees.

** Less than 0.05 percent.

Source: Survey Branch, Office of Program Planning and Evaluation, Equal Opportunity Commission.

Sample: Nationwide - 38,993 units, Massachusetts -4,599 units, 2,089 employers. The total employment figure nationwide was 36,028,647, for Massachusetts 989,913.

Table 15
Full and Part-time Status
Massachusetts Labor Force
Annual Averages
(in 000's)

	Full-time Labor Force					Part-time Labor Force			
		Employed		Unemployed (Looking for Full-time Work)				Unemployed (Looking for Part-time Work)	
Year	Total	Full-time Schedules	Part-time for Economic Reasons	Number	Percent of Full-time Labor Force	Total	Employed Voluntarily Employed Part-time	Number	Percent of Part-time Labor Force
1980	2399.0	2182.0	92.0	125.0	5.2	495.0	457.0	38.0	7.6
1979	2250.0	2065.0	83.0	102.0	4.6	504.0	456.0	48.0	9.6
1978	2338.0	2121.0	92.0	126.0	5.4	497.0	450.0	47.0	9.4
1977	2287.0	2018.0	98.0	171.0	7.5	493.0	439.0	54.0	11.0
1976	2258.0	1957.0	97.0	204.0	9.0	505.0	446.0	59.0	11.6
1975	2229.0	1881.0	99.0	248.0	11.1	506.0	449.0	57.0	11.2

Source: 1979, 1978, 1977, 1976, 1975 Geographic Profile of Employment and Unemployment.
U. S. Department of Labor
Bureau of Labor Statistics
1980 data is from the draft copy of the same report.

B. Employment Projections by Occupation

The occupational projections which appear in this section are from Employment Requirements by Occupation, by Industry 1976-1985. This publication was prepared by the Occupation/Industry Research Department of the Massachusetts Division of Employment Security. The projections were made following procedures outlined in BLS Bulletin 1606, the methodology is fully explained in the report. *

During the course of the nine years projected, approximately one and a quarter million job openings will occur in the state. Some 423,000 of these job openings will be due to growth -- about one-third of the total. The rest will be needed as replacements.

The greatest absolute changes are expected in the clerical, service and professional occupations. The greatest percentage increases are projected for clerical workers, service workers, and managers. Above average job openings due to growth are seen for clerical workers, professionals and crafts workers.

In 1981 the Executive Office of Economic Affairs issued a report titled 50 High Demand Occupations In Massachusetts-1981. This work was a joint effort by the economists of the Division of Employment Security, the Department of Manpower Development, and the Massachusetts Occupational Information Coordinating Committee. This report's purpose is to provide information which will help individuals considering a job or career change to make informed choices. We have reprinted two indices from the report for reader convenience. The first is an alphabetical index of High Demand Occupations in Massachusetts. The second lists these occupations by their major occupational clusters.

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* The information in the report should be used as indicators of trend, relative magnitude and probable direction rather than a specific forecasts of actual employment levels. The information should also be used in conjunction with other data prepared by this agency and other public and private organizations - for example, the series on Vocational Education and Workforce Planning prepared by the Labor Area Research Department. It should be noted that the projections are based on 1976 industry employment.

Table 16

Massachusetts Employment by Occupation
1976 and Projected 1985

Occupational Title	Employment			Annual Labor Demand 1976 - 1985				
	1976	1985	Net Changes 1976-1985	Average Annual Openings	Openings Due to Growth		Openings Due To Separations	
					Number	percent	Number	Percent
Total - All Occupations	2,450,430	2,873,240	422,810	142,370	46,980	33.0	95,390	67.0
Prof., Tech., Kindred	434,650	500,960	66,320	20,470	7,310	35.7	13,160	64.3
Managers	260,570	309,470	48,900	16,490	5,430	32.9	11,060	67.1
Sales Workers	154,030	179,880	25,850	10,400	2,870	27.6	7,530	72.4
Clerical Workers	469,510	581,830	112,320	32,390	12,480	38.5	19,910	61.5
Crafts & Kindred Workers	289,810	334,480	44,670	14,140	4,960	35.1	9,180	64.9
Operatives	378,220	424,900	46,680	18,900	5,200	27.5	13,700	72.5
Service Workers	342,020	414,160	72,140	24,910	8,010	32.2	16,900	67.8
Laborers except Farm	98,380	108,940	10,560	4,000	1,170	29.3	2,830	70.7

Summed parts may not equal totals because of rounding. Data for Farmers and Farm Workers not listed.

Source: Employment Requirements by Occupation, by Industry 1976-1985.

Index 1

Annual Labor Demand

Massachusetts 1976 - 1985, Openings Due to Growth
(Occupations Whose Annual Openings Due to Growth Will Exceed 200)

Rank	Occupation	Number of Openings
1.	Secretaries (General)............	3,410
2.	Sales Clerks	2,200
3.	Cashiers.........................	1,050
4.	Waiters and Waitresses...........	760
5.	Nurses Aides.....................	730
6.	Cooks............................	670
7.	Electronics Technicians..........	570
8.	Carpenters.......................	560
9.	Bookkeepers......................	490
10.	Child Care Workers...............	460
11.	Clerk-Typists....................	460
12.	Typists..........................	460
13.	Secretaries (Medical)............	450
14.	Drafters.........................	360
15.	Plumbers and Pipefitters.........	360
16.	Food Workers.....................	350
17.	Real Estate Agents & Brokers.....	330
18.	Construction Workers.............	320
19.	Air Conditioning, Heating, and Refrigeration Mechanics..........	300
20.	Electricians.....................	300
21.	Painters and Apprentices.........	270
22.	Auto Mechanics...................	260
23.	Billing Clerks...................	240
24.	Guards...........................	240
25.	Secretaries (Legal)..............	230

(Occupations Whose Annual Openings Due to Growth Will be Less Than The Annual Separations)

1.	Compositors and Typesetters......	-100
2.	Stenographers....................	- 60
3.	Bus Drivers	- 50
4.	Keypunch, Data Entry Operators...	- 40
5.	Cabinet Makers...................	- 20
6.	Cosmetologists	- 20
7.	Bakers...........................	- 10
8.	Barbers	- 10
9.	Drill Press Operators	- 10
10.	Furniture & Wood Finishers.......	- 10
11.	Grinding Machine Operators.......	- 10
12.	Upholsterers.....................	- 10

Source: "Employment Requirements by Occupation, by Industry 1976-1985" Occupational/Industry Publication, Massachusetts Division of Employment Security, December 1979.

Index 2

Alphabetical Index of High Demand Occupations

1. Air Conditioning, Heating and Refrigeration Mechanics
2. Assemblers
3. Bank, Financial Managers
4. Bookkeepers
5. Buyers, Wholesale and Retail
6. Carpenters and Apprentices
7. Child Care Workers
8. Clinical Lab Technicians
9. Computer Programmers
10. Computer Service Technologists
11. Computer Systems Analysts
12. Cooks
13. Dental Assistants
14. Dental Hygientists
15. Drafters
16. Electrical Engineers
17. Electricians and Apprentices
18. Electronic Technicians
19. Excavating and Grading Machine Operators
20. Expeditors, Production Controllers
21. Fork Lift Operatives
22. Health Administrators
23. Health Aides
24. Heavy Equipment Mechanics
25. Industrial Engineers
26. Insurance Adjusters, Examiners
27. Lathe Machine Operatives
28. Legal Secretaries
29. Machinists
30. Managers, Superintendents of Buildings
31. Mechanical Engineers
32. Medical Secretaries
33. Opticians and Lens Grinders
34. Other Secretaries
35. Painters and Apprentices
36. Personnel and Labor Relations Workers
37. Photographic Process Workers
38. Plumbers and Pipefitters
39. Practical Nurses
40. Purchasing Agents
41. Radio and Television Repairers
42. Radiologic Technicians
43. Real Estate Agents, Brokers
44. Receptionists
45. Registered Nurses
46. Shipping and Receiving Clerks
47. Therapists
48. Tool and Die Makers
49. Truck Drivers
50. Waitresses and Waiters

Index 3
High Demand Occupations by Major Occupational Clusters

I. Professional and Technical

  A. Engineers

    1. Electrical Engineers
    2. Industrial Engineers
    3. Mechanical Engineers
    4. Drafters

  B. Health

    5. Registered Nurses
    6. Clinical Lab Technicians
    7. Dental Hygientists
    8. Radiological Technologists
    9. Therapists

  C. Other Technical

    10. Electronic Technicians
    11. Computer Programmers
    12. Computer Systems Analysts
    13. Computer Service Technologists

  D. Other Professionals, Managers and Proprietors

    14. Personnel and Labor Relations
    15. Bank, Financial Managers
    16. Buyers, Wholesale and Retail
    17. Purchasing Agents
    18. Health Administrators
    19. Managers, Superintendents of Buildings
    20. Real Estate Agents, Brokers

II. Clerical Occupations

    21. Legal Secretaries
    22. Medical Secretaries
    23. Other Secretaries
    24. Bookkeepers
    25. Expeditors, Production Controllers
    26. Insurance Adjusters, Examiners
    27. Receptionists
    28. Shipping and Receiving Clerks

Index 3
(continued)

III. Craft Workers

29. Carpenters and Apprentices
30. Electricians and Apprentices
31. Painters and Apprentices
32. Plumbers and Pipefitters
33. Excavating and Grading Machine Operators
34. Heavy Equipment Mechanics
35. Air Conditioning, Heating and Refrigeration Mechanics
36. Machinists
37. Tool and Die Makers
38. Radio and Television Repairers
39. Opticians and Lens Grinders

IV. Operatives

40. Assemblers
41. Photographic Process Repairers
42. Fork Lift Operatives
43. Truck Drivers
44. Lathe Machine Operatives

V. Service Workers

45. Cooks
46. Waitresses and Waiters
47. Dental Assistants
48. Health Aides
49. Practical Nurses
50. Child Care Workers

V. Trends in Unemployment

The unemployment rate is the most widely used index for measuring the performance of a state's economy and the impact of that economy on individuals. It is designed to measure the portion of the overall labor force that is unutilized at any given period of time. One of the major sources of data at the national and state level is the Current Population Survey. The CPS is a monthly survey of 1,575 Massachusetts households conducted by the Bureau of Census for the United States Department of Labor's Bureau of Labor Statistics. The unemployment rate is calculated by dividing the number of people who are classified as unemployed by the civilian labor force which is the sum of the employed and unemployed. By definition, an unemployed individual is one who did not work at all during the reference weeks, had looked for work during the past four weeks, and was available for work at the same time of the survey.

This section will examine estimates of the 1980 annual average unemployment rates for the United States, Massachusetts, and the remaining states. In addition, demographic data is provided to view the unemployment situation of different components within the Massachusetts economy.

An analysis of recent activity in claims, presented in Table 17 shows that continued weeks claimed from January to June 1981 have averaged about the same as during the first six months of 1980. We expect the last half of the year to be different. Normally, there is a sharp increase in claims during July. This year we expect the claims activity to be especially great due to state and local government cutbacks caused by Proposition 2½. Another significant factor is that the estimated number of people who have exhausted their unemployment benefits and are still jobless is about 20 percent greater than last year. We expect this situation to get worse.

The data from the Current Population Survey (CPS) on Tables 18 and 19 shows recent trends in the unemployment rate . The Massachusetts economy weathered well the national downturn in economic activity between the years 1979 and 1980. While the national unemployment rate was increasing by 1.3 percentage points, Massachusetts rate only increased 0.1 of a percentage point. Among the ten large CPS states, Massachusetts had the second lowest increase in unemployment. The data shows that Massachusetts has not followed the nation and other industrial states into higher unemployment as it did during the mid-seventies recession. In 1975 we were 2.7 percentage points higher than the national unemployment rate, and had the second highest rate among the ten large CPS states.

Why Does Massachusetts Have Lower Unemployment?

The difference in our performance during these periods may be traced to the changing composition of industry in Massachusetts. Those industries which are adversely affected by high inflation rates and decreased business activity such as leather and textiles have relatively declined in importance for the state. In their place, high technology industries have expanded, providing numerous job opportunities. Additionally, major defense contractors within Massachusetts are gearing up for military prime contract awards.

Another significant, yet often overlooked reason for our lower unemployment rate is that all important demographic groups in Massachusetts have profited by the higher employment levels. To put it another way, the major segments of our labor force experience unemployment at rates that are more nearly equal than is true nationally. The 1980 annual CPS data on Tables 20 and 21 illustrate this point. The Massachusetts unemployment rate in 1980 was 5.6 percent. The rates for men, women, Whites and Blacks and others were all virtually the same - either 5.6 or 5.7 percent. In many states the two sexes' rates often are very different, the rate for men usually being lower. In only two other states were the rates so nearly equal. Only Hawaii had a lower unemployment rate for Nonwhites in 1980 than Massachusetts. Hawaii is an exceptional state, since it is mostly Nonwhite, and most of its Nonwhite population is also not Black. Youth 16-19 years old is the only age cohort with an unemployment rate substantially higher than that of the state according to the CPS. Even so, our youth unemployment rate was comparatively low. At 14 percent it was below the national average, lower than any comparable state or larger, and was the lowest in the Northeast after New Hampshire and Vermont.

Finally, it is important to note that all areas of Massachusetts are not doing well. The map on page 67 and Table 23 illustrate this point. The Boston, Springfield, and Worcester labor areas carry the state. They have relatively low unemployment, and when combined account for approximately two-thirds of the state's labor force. Low statewide unemployment rates somewhat mask the fact that parts of Central Massachusetts, the North Shore, and the entire Southeastern part of the state (except Nantucket) consistently suffer unemployment levels which are equal to or greater than the national average. It is important to note that Southeast Massachusetts had the greatest percent increase in population during the past decade.

Future Trends

We have forecast a statewide unemployment rate of 5.7 percent for FFY 1982. This forecast could prove to be too optimistic due to several factors. First, the latest Data Resourses Incorporated (DRI) forecast for the national economy anticipated rising unemployment rates through the last quarter of calendar 1981. This represents an additional quarter of rising unemployment rates.

In the past, Massachusetts went into recession later than the United States as a whole, and stayed in recession longer. However, the national recession has really affected us for the last six months. If past patterns hold true, Massachusetts may only start a real recovery during the March-June 1982 quarter. Therefore, our original estimate of 5.7 percent unemployment for FFY '82 would be too low.

Secondly, employment growth may not be as strong as we had hoped. Several of our high-tech firms have implemented hiring freezes, or have begun to lay off workers. One reason for this is the length of the national recession. Another and equally important reason is that Europe is also in recession. Many of our high-tech firms export a significant portion of their goods abroad. Europe is expected to have fairly strong growth in 1982 and 1983, so the long-term export prospects are good.

Lastly, we must deal with the affects of Proposition 2½. Thousands of state and municipal workers will be let go just as the private sector employment growth is weakening. The 14,000 former state and municipal employees who collected unemployment benefits during July translates into an unemployment rate increase of one-half of a percentage point. Although we still do not know the full affects of Proposition 2½, it undoubtedly will cause upward pressure on the unemployment rate.

Table 17
Claims Data
Monthly Survey Week
January 1980-June 1981

	State UI Continued Claimants	State UI Initial Claims	Federal Civilian Continued Claims	Unemployed Exhaustees
1980				
January	89,621	9,662	917	16,012
February	87,752	11,684	519	15,119
March	83,718	7,822	481	15,266
April	76,491	9,476	413	15,680
May	71,882	11,664	444	16,246
June	74,001	10,878	481	16,467
July	88,765	11,962	799	16,492
August	79,062	7,892	848	16,834
September	66,320	7,653	1,297	16,740
October	65,956	7,962	1,315	16,754
November	70,971	10,363	1,435	16,874
December	79,392	16,931	1,187	17,287
1980 Annual Average	77,828	10,329	845	16,314
1981				
January	99,567	10,722	1,033	17,872
February	94,159	11,452	778	18,478
March	88,297	8,439	600	18,878
April	74,585	10,762	469	19,503
May	64,801	8,374	600	19,673
June	64,902	11,386	618	19,673
1981 6-Month Average	81.052	10,189	683	19,013

Table 18

State Monthly Labor Force Data
(Seasonally Adjusted)
January 1980-June 1981
(in thousands)

Month	Labor Force	Employment	Unemployment	Unemployment Rate	
				Mass.	U. S.
1979 Annual Average	2891.0	2731.0	160.0	5.5	5.8
1980					
January	2831.0	2682.0	149.0	5.3	6.2
February	2843.0	2698.0	145.0	5.1	6.2
March	2852.0	2707.0	145.0	5.1	6.3
April	2860.0	2706.0	154.0	5.4	6.9
May	2883.0	2706.0	177.0	6.1	7.6
June	2836.0	2656.0	180.0	6.3	7.5
July	2873.0	2701.0	172.0	6.0	7.6
August	2892.0	2727.0	165.0	5.7	7.6
September	2932.0	2762.0	170.0	5.8	7.4
October	2988.0	2792.0	196.0	6.6	7.6
November	2964.0	2811.0	153.0	5.2	7.5
December	2968.0	2822.0	146.0	4.9	7.4
Annual Average	2893.0	2731.0	163.0	5.6	7.1
1981					
January	2917.0	2764.0	153.0	5.2	7.4
February	2969.0	2797.0	171.0	5.8	7.3
March	2954.0	2777.0	177.0	6.0	7.3
April	2904.0	2741.0	163.0	5.6	7.3
May	2917.0	2743.0	174.0	6.0	7.6
June	2928.0	2749.0	179.0	6.1	7.3

Table 19
1981 Unemployment Rates
Seasonally Adjusted
United States and Ten CPS States*

	January	February	March	April	May	June
United States	7.4	7.3	7.3	7.3	7.6	7.3
Massachusetts	5.2	5.8	6.0	5.6	6.0	6.1
California	7.5	7.6	7.2	7.1	6.5	6.7
Florida	6.1	6.7	7.0	6.2	7.3	6.0
Illinois	9.0	8.3	9.0	8.5	8.7	7.7
Michigan	13.0	13.5	12.6	11.9	11.3	10.6
New Jersey	7.5	6.9	8.6	7.9	7.8	7.0
New York	7.6	7.6	8.2	8.4	7.5	8.0
Ohio	9.7	9.4	8.9	7.7	8.2	7.9
Pennsylvania	8.7	8.0	7.2	7.3	8.7	9.0
Texas	5.2	4.4	4.8	4.6	5.3	6.6
Rank of Massachusetts	1st	2nd	2nd	2nd	2nd	2nd
Mass.- U. S. Difference in Percentage Points	-2.2	-1.5	-1.3	-1.7	-1.6	-1.2

* The CPS states are the ten large states which get their statewide employment and unemployment data from the National Burea of Labor Statistics.

Table 20
Unemployment by State and Race
1979 and 1980

Area	1979						1980					
	Total		White		Black and Other		Total		White		Black and Other	
	Unemploy-ment Rate	State's Rank	Unemploy-ment Rate	State's Rank	Unemploy-ment Rate	State's Rank 1/	Unemploy-ment Rate	State's Rank	Unemploy-ment Rate	State's Rank	Unemploy-ment Rate	State's Rank 1/
United States	5.8	--	5.1	--	11.3	--	7.1	--	6.3	--	13.2	--
Northeast	6.6	--	6.0	--	12.4	--	7.1	--	6.5	--	13.1	--
New England	5.4	--	5.2	--	10.3	--	6.0	--	5.8	--	9.3	--
Connecticut	5.1	18 3/	4.5	21 3/	14.3	31	5.9	15	5.5	20 3/	10.5	6
Maine	7.2	47	7.1	47 3/	2/	--	7.7	38 3/	7.7	43 3/	2/	--
Massachusetts	5.5	24 3/	5.5	34	7.0	5 3/	5.6	11 3/	5.6	22	5.7	2
New Hampshire	3.1	2	3.1	4 3/	2/	--	4.7	4 3/	4.7	9	2/	--
Rhode Island	6.6	37 3/	6.5	43 3/	2/	--	7.2	30 3/	7.2	39 3/	2/	--
Vermont	5.1	18	5.1	30 3/	2/	--	6.4	20 3/	6.4	31	2/	--
Middle Atlantic	7.0	--	6.2	--	12.7	--	7.5	--	6.7	--	13.6	--
New Jersey	6.9	43 3/	6.2	40	12.2	22 3/	7.2	30 3/	6.2	27 3/	15.0	24 3/
New York	7.1	45 3/	6.4	41 3/	11.6	21	7.6	36 3/	6.9	37 3/	11.5	9 3/
Pennsylvania	6.9	43 3/	6.1	39	16.2	35	7.8	40	6.8	36	17.4	33
South	5.4	--	4.2	--	10.7	--	6.4	--	5.2	--	12.2	--
South Atlantic	5.5	--	4.3	--	10.3	--	6.4	--	5.1	--	11.3	--

Table 20
Unemployment by State and Race
1979 and 1980
(continued)

Area	1979						1980					
	Total		White		Black and Other		Total		White		Black and Other	
	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/
South Atlantic (continued)												
Delaware	8.0	49	7.1	47 3/	14.9	33	7.7	38 3/	6.7	35	15.0	24 3/
Florida	6.0	32	4.9	27 3/	10.9	17	6.0	16 3/	5.1	14 3/	10.0	4
Georgia	5.1	18 3/	3.7	10 3/	11.1	18 3/	6.4	20 3/	4.8	10 3/	13.1	17
Maryland	5.9	30 3/	4.2	16 3/	12.2	22 3/	6.4	20 3/	5.3	16 3/	10.2	5
North Carolina	4.8	15 3/	3.7	10 3/	8.9	10	6.6	23	5.1	14 3/	12.2	15 3/
South Carolina	5.0	17	4.4	18 3/	6.9	4	6.9	27	4.9	13	12.1	14
Virginia	4.7	14	3.4	8	11.1	18 3/	5.1	9	3.8	2 3/	11.1	7
West Virginia	6.7	39 3/	6.4	41 3/	2/	--	9.4	47	9.1	49	2/	--
East South Central	6.1	--	4.9	--	11.9	--	7.9	--	6.3	--	15.2	--
Alabama	7.1	45 3/	5.4	33	13.0	26	8.8	46	6.5	32 3/	15.7	29
Kentucky	5.6	26	5.3	32	9.6	13	8.1	42	7.7	43 3/	14.2	20
Mississippi	5.8	28 3/	3.7	10 3/	10.5	15 3/	7.5	34 3/	4.8	10 3/	13.9	19
Tennessee	5.8	28 3/	4.6	24 3/	12.8	24 3/	7.2	30 3/	5.7	23 3/	15.6	28
West South Central	4.7	--	3.8	--	10.8	--	5.7	--	4.7	--	11.9	--
Arkansas	6.2	33 3/	4.4	18 3/	17.3	37	7.6	36 3/	6.5	32 3/	15.3	26
Louisiana	6.7	39 3/	4.5	21 3/	12.8	24 3/	6.7	24 3/	4.8	10 3/	12.2	15 3/
Oklahoma	3.4	4 3/	3.0	2 3/	8.6	9	4.8	6	4.1	5	13.2	18
Texas	4.2	9 3/	3.7	10 3/	8.5	8	5.3	10	4.5	7 3/	11.2	8

Table 20
Unemployment by State and Race
1979 and 1980
(continued)

Area	1979						1980					
	Total		White		Black and Other		Total		White		Black and Other	
	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/
North Central	5.5	--	4.7	--	13.2	--	8.2	--	7.3	--	18.3	--
East North Central	6.1	--	5.3	--	13.5	--	9.3	--	8.2	--	18.9	--
Illinois	5.5	24 3/	4.6	24 3/	11.4	20	8.3	44	7.3	41 3/	15.5	27
Indiana	6.4	36	5.7	36	15.2	34	9.6	48 3/	8.8	48	19.2	36
Michigan	7.8	48	6.5	43 3/	16.3	36	12.6	50	11.1	50	23.5	38
Ohio	5.9	30 3/	5.1	30 3/	13.6	29	8.4	45	7.3	41 3/	19.1	35
Wisconsin	4.5	12 3/	4.4	18 3/	9.4	11 3/	7.0	28 3/	6.6	34	17.7	34
West North Central	4.0	--	3.6	--	11.7	--	5.6	--	5.2	--	15.2	--
Iowa	4.1	8	4.0	14	2/	--	5.7	13 3/	5.3	16 3/	2/	--
Kansas	3.4	4 3/	3.2	6 3/	7.0	5 3/	4.4	3	3.8	2 3/	14.9	23
Minnesota	4.2	9 3/	4.1	15	2/	--	5.7	13 3/	5.5	20 3/	2/	--
Missouri	4.5	12 3/	3.5	9	13.4	27 3/	7.0	28 3/	6.2	27 3/	14.6	21
Nebraska	3.2	3	3.0	2 3/	2/	--	4.0	2	3.6	1	2/	--
North Dakota	3.7	7	3.2	6 3/	2/	--	4.9	7	4.5	7 3/	2/	--
South Dakota	3.5	6	3.1	4 3/	2/	--	4.7	4 3/	4.2	6	16.7	32

Table 20
Unemployment by State and Race
1979 and 1980
(continued)

Area	1979						1980					
	Total		White		Black and Other		Total		White		Black and Other	
	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/
West	6.0	--	5.7	--	9.0	--	6.8	--	6.3	--	10.9	--
Mountain	5.0	--	4.8	--	9.8	--	6.2	--	6.0	--	12.4	--
Arizona	5.1	18 3/	4.9	27 3/	8.2	7	6.7	24 3/	6.3	30	15.9	30
Colorado	4.8	15 3/	4.5	21 3/	10.5	15 3/	5.6	11 3/	5.3	16 3/	11.7	12
Idaho	5.7	27	5.6	35	2/	--	7.9	41	7.8	45	2/	--
Montana	5.1	18 3/	4.7	26	14.7	32	6.0	16 3/	5.4	19	20.0	37
Nevada	5.1	18 3/	5.0	29	6.4	2 3/	6.2	18 3/	5.7	23 3/	9.4	3
New Mexico	6.6	37 3/	6.0	38	13.4	27 3/	7.4	33	6.9	37 3/	11.9	13
Utah	4.3	11	4.2	16 3/	6.4	2 3/	6.2	18 3/	6.1	25 3/	2/	--
Wyoming	2.8	1	2.8	1	2/	--	3.9	1	3.9	4	2/	--
Pacific	6.4	--	6.0	--	8.9	--	7.0	--	6.4	--	10.7	--
Alaska	9.2	50	8.3	49	13.7	30	9.6	48 3/	8.6	47	14.8	22
California	6.2	33 3/	5.8	37	9.4	11 3/	6.8	26	6.1	25 3/	11.5	9 3/
Hawaii	6.3	35	8.7	50	5.3	1	5.0	8	6.2	27 3/	4.7	1
Oregon	6.8	41 3/	6.7	46	2/	--	8.2	43	8.0	46	16.0	31
Washington	6.8	41 3/	6.6	45	10.0	14	7.5	34 3/	7.2	39 3/	11.6	11

1/ Unemployment Data for Blacks and Others was available for 37 states for 1979, and 38 States for 1980.

2/ Data Unavailable.

3/ Tied.

Source: Draft copy of the 1980 Geographic Profile of Employment and Unemployment 1980.

Table 21
1980 Annual Average Unemployment Rates
Men, Women, and Youth
(in percents)

	Total	Men	Women	Both Sexes 16-19 Years Old
United States	7.1	6.9	7.4	17.9
Massachusetts	5.6	5.7	5.6	14.0
U. S.-Massachusetts Percentage Point Difference	-1.5	-1.2	-1.8	- 3.9
Massachusetts Ranking Among The States	11th	17th	10th	12th
Alabama	8.8	7.6	10.4	25.0
Alaska	9.6	10.1	8.8	20.9
Arizona	6.7	6.9	6.3	18.2
Arkansas	7.6	7.2	8.2	22.8
California	6.8	6.8	6.8	18.2
Colorado	5.6	5.0	6.4	15.8
Connecticut	5.9	5.2	6.8	17.5
Delaware	7.7	6.8	8.9	20.0
Florida	6.0	5.3	6.8	18.1
Georgia	6.4	4.8	8.5	16.1
Hawaii	5.0	4.6	5.4	14.6
Idaho	7.9	7.4	8.5	17.3
Illinois	8.3	8.5	8.1	19.3
Indiana	9.6	9.6	9.7	21.8
Iowa	5.7	5.7	5.9	14.9
Kansas	4.4	4.1	4.8	11.6
Kentucky	8.1	8.4	7.7	20.2
Louisiana	6.7	6.4	7.1	19.5
Maine	7.7	7.2	8.4	17.9
Maryland	6.4	6.1	6.9	17.3
Michigan	12.6	13.6	11.1	20.9
Minnesota	5.7	6.1	5.1	11.7
Mississippi	7.5	5.8	9.5	22.2
Missouri	7.0	7.0	7.1	16.2
Montana	6.0	5.6	6.5	16.2
Nebraska	4.0	3.6	4.6	10.3
Nevada	6.2	6.0	6.4	15.2
New Hampshire	4.7	4.4	5.1	12.4
New Jersey	7.2	6.6	8.1	20.2
New Mexico	7.4	7.1	7.9	21.2

Table21

1980 Annual Average Unemployment Rates
Men, Women, and Youth
(in percents)

(continued)

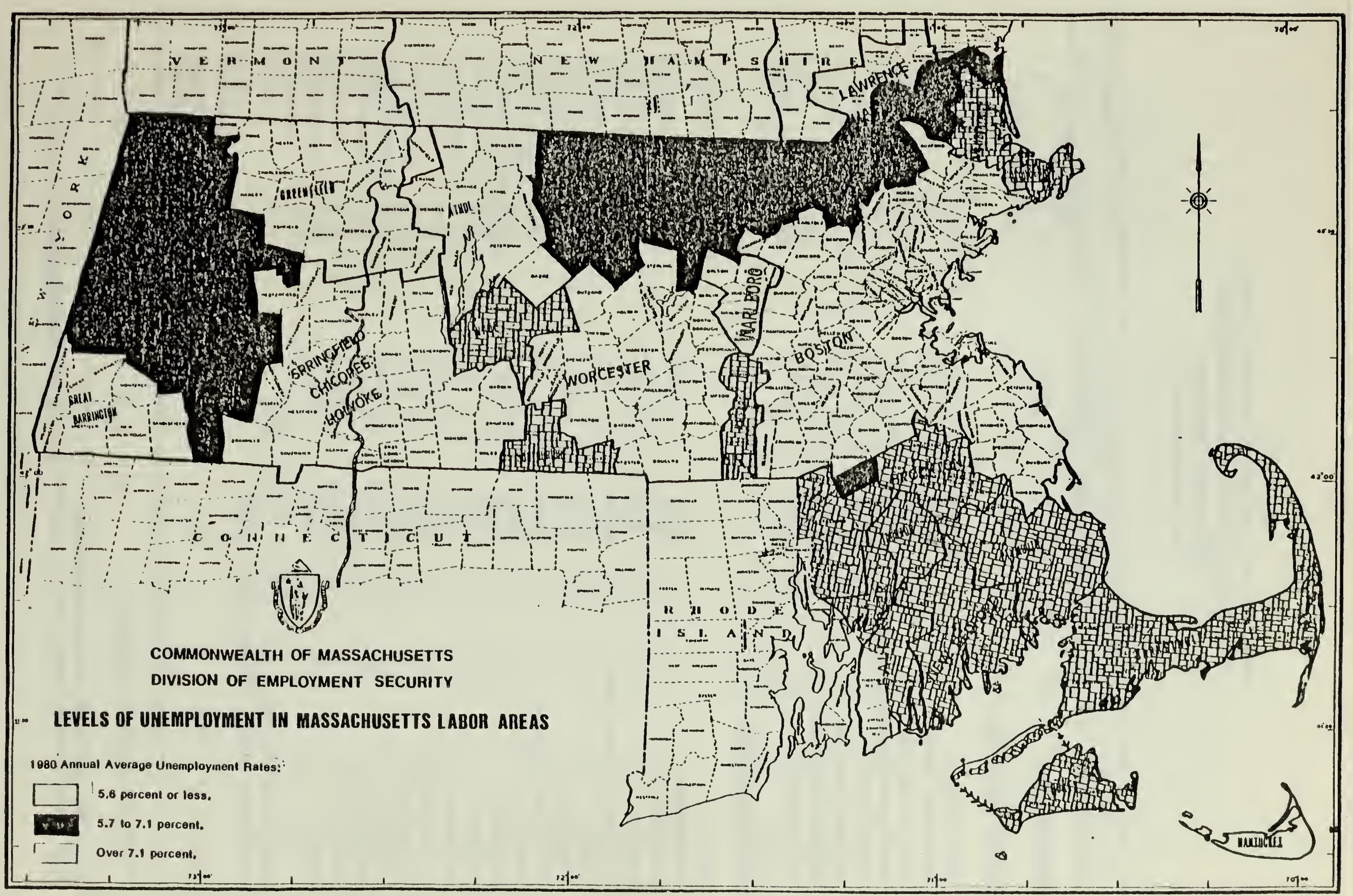
	Total	Men	Women	Both Sexes 16-19 Years Old
New York	7.6	7.4	7.7	20.1
North Carolina	6.6	6.1	7.1	18.6
North Dakota	4.9	4.7	5.2	12.9
Ohio	8.4	8.4	8.3	17.7
Oklahoma	4.8	4.6	5.0	12.9
Oregon	8.2	7.7	9.0	17.7
Pennsylvania	7.8	7.8	7.8	19.8
Rhode Island	7.2	6.7	7.9	17.1
South Carolina	6.9	6.2	7.7	13.5
South Dakota	4.7	4.8	4.6	8.5
Tennessee	7.2	6.8	7.7	20.8
Texas	5.3	4.5	6.3	15.7
Utah	6.2	5.6	7.1	13.4
Vermont	6.4	5.6	7.5	12.3
Virginia	5.1	4.3	6.1	18.3
Washington	7.5	7.5	7.4	15.2
West Virginia	9.4	9.8	8.6	23.2
Wisconsin	7.0	7.3	6.6	17.4
Wyoming	3.9	3.1	5.1	9.4

Source: Draft copy, Geographic Profile of Employment and Unemployment - 1980

Table 22
Trends In unemployment
1970-1980

Annual Averages	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
United States	4.9	5.9	5.6	4.9	5.6	8.5	7.7	7.0	6.0	5.8	7.1
Massachusetts	4.6	6.6	6.4	6.7	7.2	11.2	9.5	8.1	6.1	5.5	5.6
New England - Total	4.9	6.9	6.8	6.1	6.6	10.4	9.1	7.7	5.7	5.4	6.0
Connecticut	5.7	8.4	8.6	6.3	6.1	9.1	9.5	7.0	5.2	5.1	5.9
Maine	5.5	7.4	6.8	5.8	6.5	10.3	8.9	8.4	6.1	7.2	7.7
New Hampshire	3.8	5.1	4.8	4.4	5.5	9.0	6.4	5.9	3.8	3.1	4.7
Rhode Island	4.1	5.4	5.1	4.8	5.5	11.2	8.1	8.6	6.6	6.6	7.2
Vermont	4.5	6.3	11.9	5.3	6.4	9.4	8.7	7.0	5.7	5.1	6.4
Rank of Massachusetts	4th	4th	3rd	6th	6th	6th	6th	4th	4th[3]	4th	2nd
Mass.-New England Difference	-0.3	-0.3	-0.4	+0.6	+0.6	+0.8	+0.4	+0.4	+0.4	+0.1	-0.4
CPS States											
California	7.3	8.8	7.6	7.0	7.3	9.9	9.2	8.2	7.1	6.2	6.8
Florida	4.3	4.9	5.1	4.3	6.2	10.7	9.0	8.2	6.6	6.0	6.0
Illinois	3.6	5.1	5.1	4.1	4.2	7.1	6.5	6.2	6.1	5.5	8.3
Michigan	6.7	7.6	7.0	5.9	7.4	12.5	9.4	8.2	6.9	7.8	12.6
New Jersey	4.6	5.7	5.8	5.6	6.3	10.2	10.4	9.4	7.2	6.9	7.2
New York	4.5	6.6	6.7	5.4	6.4	9.5	10.3	9.1	7.7	7.1	7.6
Ohio	5.4	6.5	5.5	4.3	4.8	9.1	7.8	6.5	5.4	5.9	8.4
Pennsylvania	4.5	5.4	5.4	4.8	5.1	8.3	7.9	7.7	6.9	6.9	7.8
Texas	4.4	5.0	4.5	3.9	4.3	5.6	5.7	5.3	4.8	4.2	5.3
Rank of Massachusetts	6th[1]	7th[2]	7th	9th	8th	9th	8th	5th	3rd[4]	2nd[4]	2nd
Mass.-United States Difference	-0.3	+0.7	+0.9	+1.8	+1.6	+2.7	+1.8	+1.1	+0.1	-0.3	-1.5

[1] Tied with New Jersey
[2] Tied with New York
[3] Tied with Maine
[4] Tied with Illinois



COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY

LEVELS OF UNEMPLOYMENT IN MASSACHUSETTS LABOR AREAS

1980 Annual Average Unemployment Rates:

- ☐ 5.6 percent or less.
- ■ 5.7 to 7.1 percent.
- ▨ Over 7.1 percent.

Table 23
Labor Force, Employment, Unemployment
Massachusetts and The Labor Areas
1980 Annual Averages
(in thousands)

Areas	Labor Force	Employment	Unemployment	Unemployment Rate
Massachusetts	2893.0	2731.0	163.0	5.6
Major Labor Areas				
Boston SMSA	1407.0	1336.7	70.3	5.0
Brockton SMSA	81.8	76.2	5.6	6.8
Fall River LMA*	66.5	61.0	5.5	8.2
Lawrence-Haverhill SMSA*	115.7	108.5	7.2	6.2
Lowell LMA	121.4	114.6	6.9	5.7
New Bedford LMA	81.7	75.2	6.6	8.1
Springfield LMA	271.9	257.0	14.9	5.5
Worcester LMA	197.4	187.2	10.2	5.2
Other Labor Areas				
Athol	11.1	10.5	0.6	5.5
Barnstable	67.3	61.7	5.6	8.4
Clinton	9.7	9.1	0.6	5.8
Dukes	5.5	5.1	0.4	6.7
Fitchburg-Leominster	48.0	45.0	3.0	6.1
Gardner	21.1	19.9	1.3	6.0
Gloucester	24.0	22.1	2.0	8.2
Great Barrington	9.4	8.9	0.5	4.9
Greenfield	28.2	26.7	1.5	5.4
Marlboro	59.8	57.4	2.4	4.0
Milford	17.7	16.5	1.3	7.2
Nantucket	3.0	2.9	0.1	4.7
Newburyport	18.0	16.8	1.2	6.8
Pittsfield	70.0	65.7	4.3	6.1
Plymouth	41.4	38.6	2.8	6.8
Southbridge	16.4	15.3	1.1	6.6
Taunton	26.1	24.1	2.0	7.8
Ware	6.0	5.5	0.5	8.2
Massachusetts Share of Providence Rhode Island LMA	46.8	43.7	3.1	6.6
Balance of State	20.5	19.2	1.3	6.5

* Massachusetts Portion

Data may not add due to rounding.
All unemployment rates were computed using unrounded data.

Table 24
Unemployment Rate Trend Series
1975-1980
Massachusetts

Areas	1975	1976	1977	1978	1979	1980
United States	8.5	7.7	7.0	6.0	5.8	7.1
Massachusetts	11.2	9.5	8.1	6.1	5.5	5.6
Major Labor Areas						
Boston SMSA	10.5	9.1	7.8	5.8	5.3	5.0
Brockton SMSA	11.7	10.3	9.2	6.5	6.2	6.8
Fall River LMA*	11.6	9.6	9.4	7.3	7.5	8.2
Lawrence-Haverhill SMSA*	13.6	12.3	10.1	7.1	7.2	6.2
Lowell LMA	12.0	10.2	8.4	6.4	5.5	5.7
New Bedford LMA	14.0	11.4	10.9	8.5	7.5	8.1
Springfield LMA	11.3	9.0	7.1	5.3	4.8	5.5
Worcester LMA	11.2	8.9	6.7	4.9	4.6	5.2
Other Labor Areas						
Athol	11.3	10.5	8.3	5.7	5.3	5.5
Barnstable	13.5	12.3	11.3	8.7	7.6	8.4
Clinton	12.5	10.5	12.3	7.8	5.9	5.8
Dukes	8.9	8.9	9.5	7.2	7.8	6.7
Fitchburg-Leominster	13.5	10.1	8.2	5.7	4.9	6.1
Gardner	12.5	10.9	8.8	5.9	5.1	6.0
Gloucester	12.0	10.7	10.5	9.8	8.5	8.2
Great Barrington	6.5	6.2	6.3	5.2	4.6	4.9
Greenfield	9.7	9.0	7.5	5.6	4.9	5.4
Marlboro	7.9	6.1	5.1	4.4	3.6	4.0
Milford	13.1	10.2	8.0	5.6	5.3	7.2
Nantucket	6.3	6.4	7.2	5.8	5.5	4.7
Newburyport	13.1	11.1	9.3	7.3	7.0	6.8
Pittsfield	10.5	9.6	8.7	6.6	5.7	6.1
Plymouth	13.6	12.2	11.8	9.6	8.1	6.8
Southbridge	11.4	8.2	6.3	4.9	4.6	6.6
Taunton	13.2	8.9	9.3	7.1	7.0	7.8
Ware	18.8	14.3	10.3	6.9	6.4	8.2
Massachusetts Share of Providence Rhode Island Labor Market Area	9.5	7.7	8.0	6.2	6.1	6.6
Balance of State	12.1	10.0	8.5	6.6	6.2	6.5

* Massachusetts Portion

Characteristics of the Insured Unemployed

The following tables contain information about the characteristics of the insured unemployed. Information on the characteristics of the insured unemployed may help to achieve the following objectives:

a. Assist manpower planners in identifying target population;

b. Help give direction to governmental economic policy;

c. Identify the nature of unemployment within the state;

d. Improve public information and understanding;

Tables 25 through 27 are based on data obtained from a 9.4 percent sample of the first payments of unemployment compensation from April to June 1981. The distribution levels given do not necessarily reflect the same levels for those who are unemployed, especially those who are not insured under the Massachusetts Employment Security Law. Approximately 30 percent of the state's unemployed are not insured under this law.

The sample results showed that the average age of claimants receiving a first payment was 47, that their average weekly wage had been $202.00, and that only 2.4 percent of the claimants had deductions from their weekly benefit payments due to pension income. The majority of claimants were men (55 percent), and, on average, were younger than their female counterparts. Proportionately there were twice as many female claimants over 55 as males. Some 56 percent of the females in the sample earned under $7,000 per year, as opposed to 40 percent of the men. This points up the fact that many of the women claimants had part-time employment. At the other end of the earnings spectrum, 14.7 percent of the men had been earning $16,000 per year or better, as opposed to 3.6 percent of the women.

Tables 28A and 28B show the industrial attachment of claimants from July 1, 1980 through June 30, 1981. Although the construction industry never provided more than 3 percent of the nonagricultural jobs during the year, the industry never had less then 9 percent of the claimants. From January to June 1981, male claimants who last worked in construction accounted for over 30 percent of the male total. The manufacturing industries are also disproportionately represented among those collecting unemployment.

The tables on the racial characteristics of the insured unemployed contain monthly information from January 1980 through March 1981. The data shows that nine out of ten claimants were White. Nonwhites consistently represent a higher percentage of the insured unemployed than of the general population. Claimants with a Spanish surname accounted for a maximum of 2 percent of the monthly claimant totals. This compares favorably with the fact that Spanish surnamed individuals are 2.5 percent of the total population. (United States Census of Population, 1980).

In analyzing the average weekly wage, you should note this definition:

Average Weekly Wage: An amount equal to one-twenty-sixth of the total wage reported for an individual in the two highest quarters of his base period, or if wages were reported for not more than two quarters, the average weekly wage was equal to one-thirteenth of the highest quarter's reported wage.

Table 25A
Age Of Claimants
Percents By Age and Sex
April to June 1981

	Total	Males	Females
	100.0	55.1	44.9
Age			
Under 20	5.9	3.3	2.7
20-24	18.0	11.4	6.6
25-34	30.1	19.0	11.0
35-44	17.0	9.0	8.1
45-54	14.0	6.5	7.5
55-64	12.6	4.8	7.8
65+	2.4	1.2	1.2

Table 25B
Age Of Claimants
Percents By Sex
April to June 1981

	Total	Males	Females
Total	100.0	100.0	100.0
Age			
Under 20	5.9	5.9	5.9
20-24	18.0	20.6	14.7
25-34	30.1	34.5	24.6
35-44	17.0	16.2	18.1
45-54	14.0	11.8	16.8
55-64	12.6	8.7	17.3
65+	2.4	2.2	2.6

Table 26
Total Wages Paid During Benefit Year
Percents By Sex
April to June 1981

	Total	Males	Females
	100.0	100.0	100.0
Total Wages			
$0 - 1,199	0.1	0.1	0.1
1,200- 3,999	16.3	10.7	23.2
4,000- 6,999	25.5	19.6	32.8
7,000- 9,999	19.0	16.8	21.6
10,000- 12,999	14.5	15.9	12.8
13,000- 15,999	10.1	13.4	6.0
16,000- 18,999	6.2	9.3	2.3
19,000- 21,999	3.6	6.0	0.6
22,000- 24,999	2.3	3.9	0.3
25,000- 27,999	1.1	1.8	0.3
28,000- 30,999	0.7	1.2	0.1
31,000 or more	0.8	1.4	0.0

Table 27A
Average Weekly Wage
Percents by Age and Amount
All Claimants - April to June 1981

	Total	Age						
		Under 20	20-24	25-34	35-44	45-54	55-64	65+
Average Weekly Wage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under $100	10.5	19.3	8.6	7.5	11.0	11.5	11.9	22.8
$100-149	19.3	41.8	23.1	14.5	14.6	18.4	20.6	25.7
150-199	19.4	25.3	23.6	18.3	17.5	16.4	20.8	9.9
200-249	14.5	6.4	19.9	15.5	11.5	14.2	12.6	13.9
250-299	11.0	2.8	10.7	15.3	9.6	7.9	11.7	5.9
300-349	8.3	3.2	7.4	10.1	10.2	7.8	6.2	7.9
350-399	5.5	0.8	3.7	6.3	7.4	6.4	5.1	2.0
400-449	4.1	0.0	1.6	5.1	6.0	5.1	3.6	3.0
450 or more	7.5	0.4	1.6	7.4	12.2	12.3	7.5	8.9

Table 27B
Average Weekly Wage
Percents By Age and Amount
Male Claimants
April to June 1981

	Total	Age						
		Under 20	20-24	25-34	35-44	45-54	55-64	65+
Average Weekly Wage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under $100	4.8	16.1	6.5	4.1	1.6	2.5	2.0	15.4
$100-149	11.9	35.0	17.7	9.8	6.4	5.8	7.9	15.4
150-199	16.0	28.5	24.2	14.4	11.7	9.1	14.4	7.7
200-249	15.2	8.8	20.6	16.3	9.5	13.5	14.9	17.3
250-299	13.5	5.1	13.1	17.2	12.2	10.9	12.4	7.7
300-349	11.3	5.1	8.3	12.5	15.4	12.0	9.4	11.5
350-399	7.9	0.7	5.0	7.6	11.4	10.5	11.9	3.8
400-449	6.7	0.0	2.3	7.1	10.6	9.8	8.4	5.8
450 or more	12.8	0.7	2.3	11.0	21.2	25.8	18.8	15.4

Table 27C
Average Weekly Wage
Percents by Age and Amount
Female Claimants
April to June 1981

	Total	Age						
		Under 20	20-24	25-34	35-44	45-54	55-64	65+
Average Weekly Wage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under $100	17.4	23.2	12.2	13.3	21.3	19.2	18.0	30.6
$100-149	28.3	50.0	32.3	22.6	23.7	29.3	28.4	36.7
150-199	23.5	21.4	22.6	24.9	24.0	22.7	24.7	12.2
200-249	13.6	3.6	18.6	14.0	13.7	14.8	11.3	10.2
250-299	8.1	0.0	6.5	12.0	6.7	5.4	11.3	4.1
300-349	4.7	0.9	5.7	6.0	4.4	4.1	4.3	4.1
350-399	2.4	0.9	1.4	4.1	2.9	2.8	0.9	0.0
400-449	0.9	0.0	0.4	1.7	0.9	0.9	0.6	0.0
450 or more	1.1	0.0	0.4	1.3	2.3	0.6	0.6	2.0

Table 28A
U.I. Benefit Payments By Industry and Sex 1/

Industry		3rd Qtr. 1980	Percent	4th Qtr. 1980	Percent	1st Qtr. 1981	Percent	2nd Qtr. 1981	Percent
15-89	Total	162596	100.0	147139	100.0	198447	100.0	137744	100.0
	Male	91758	56.4	85149	57.9	131758	66.4	82591	60.0
	Female	70838	43.6	61990	42.1	66689	33.6	55153	40.0
15-17 Construction	Total	15193	100.0	17813	100.0	48707	100.0	20539	100.0
	Male	14238	93.7	16535	92.8	46759	96.0	19388	94.4
	Female	955	6.3	1278	7.2	1948	4.0	1151	5.6
19-39 Manufacturing	Total	70489	100.0	64526	100.0	69334	100.0	58209	100.0
	Male	38741	55.0	32758	50.8	37748	54.4	30312	52.1
	Female	31748	45.0	31768	49.2	31586	45.6	27897	47.9
40-49 Transp., Comm., Elec., Gas & Sanitary Svcs.	Total	12065	100.0	6493	100.0	9441	100.0	6194	100.0
	Male	5821	48.2	4667	71.9	7468	79.1	4495	72.6
	Female	6244	51.8	1826	28.1	1973	20.9	1699	27.4
50-59 Wholesale & Retail Tr.	Total	35586	100.0	31475	100.0	41250	100.0	30530	100.0
	Male	19938	56.0	18529	58.9	23836	57.8	17290	56.6
	Female	15648	44.0	12946	41.1	17414	42.2	13240	43.4
60-60 Fin., Ins., & Real Est.	Total	4336	100.0	4131	100.0	4797	100.0	4070	100.0
	Male	1893	43.7	1896	45.9	2508	52.3	1965	48.3
	Female	2443	56.3	2235	54.1	2289	47.7	2105	51.7
70-89 Services	Total	24927	100.0	22701	100.0	24918	100.0	18202	100.0
	Male	11127	44.6	10764	47.4	13439	53.9	9141	50.2
	Female	13800	55.4	11937	52.6	11479	46.1	9061	49.8

1/ Percentages by Industry

Source: Special Industrial Report for Survey Month, averaged by quarter.

Table 28B

U.I. Benefit Payments By Industry and Sex 1/

Industry		3rd Qtr. 1980	Percent	4th Qtr. 1980	Percent	1st Qtr. 1981	Percent	2nd Qtr. 1981	Percent
15-89	Total	162596	100.0	147139	100.0	198447	100.0	137744	100.0
	Male	91758	56.4	85149	57.9	131758	66.4	82591	60.0
	Female	70838	43.6	61990	42.1	66689	33.6	55153	40.0
15-17 Construction	Total	15193	9.4	17813	12.1	48707	24.5	20539	14.9
	Male	14238	8.8	16535	11.2	46759	23.5	19388	14.1
	Female	955	0.6	1278	0.9	1948	1.0	1151	0.8
19-39 Manufacturing	Total	70489	43.3	64526	43.9	69334	34.9	58209	42.2
	Male	38741	23.8	32758	22.3	37748	19.0	30312	22.0
	Female	31748	19.5	31768	21.6	31586	15.9	27897	20.2
40-49 Transp. Comm., Elec., Gas, & Sanitary Svcs.	Total	12065	7.4	6493	4.4	9441	4.8	6194	4.5
	Male	5821	3.6	4667	3.2	7468	3.8	4495	3.3
	Female	6244	3.8	1826	1.2	1973	1.0	1699	1.2
50-59 Wholesale & Retail Tr.	Total	35586	21.9	31475	21.4	41250	20.8	30530	22.2
	Male	19938	12.3	18529	12.6	23836	12.0	17290	12.6
	Female	15648	9.6	12946	8.8	17414	8.8	13240	9.6
60-69 Fin., Ins., & Real Est.	Total	4336	2.7	4131	2.8	4797	2.4	4070	3.0
	Male	1893	1.2	1896	1.3	2508	1.3	1965	1.4
	Female	2443	1.5	2235	1.5	2289	1.1	2105	1.6
70-89 Services	Total	24927	15.3	22701	15.4	24918	12.6	18202	13.2
	Male	11127	6.8	10764	7.3	13439	6.8	9141	6.6
	Female	13800	8.5	11937	8.1	11479	5.8	9061	6.6

1/ Percentages based on total.

Source: Special Industrial Report for Survey Month, averaged by quarter.

Table 29A
Racial Characteristics of Insured Unemployed*
By Massachusetts CETA Prime Sponsors
March 1981

	White	Nonwhite	Spanish Surname	Other	Not Coded	Total Claims
Mass. CETA Prime Sponsors	65,877	3,131	1,507	623	71	71,209
Boston	4,749	1,672	486	161	6	7,074
Brockton	2,744	80	26	23	2	2,875
Cambridge (EMERDA)	2,615	124	84	43	1	2,867
Fall River	2,809	14	0	13	2	2,838
Lowell	2,172	19	15	16	3	2,225
New Bedford	3,643	260	11	13	4	3,931
Pittsfield	1,810	10	2	13	2	1,837
Salem	3,630	44	10	18	1	3,703
Springfield	5,460	404	305	30	9	6,208
Worcester	3,102	77	84	19	4	3,286
Balance of State	33,143	427	484	274	37	34,365

* By Number

Table 29B
Racial Characteristics Of Insured Unemployed**
By Massachusetts CETA Prime Sponsors
March 1981

	White	Nonwhite	Spanish Surname	Other	Not Coded	Total Claims
Mass. CETA Prime Sponsors	92.5	4.4	2.1	0.9	0.1	100.0
Boston	67.1	23.6	6.9	2.3	0.1	100.0
Brockton	95.4	2.8	0.9	0.8	0.1	100.0
Cambridge (EMERDA)	91.2	4.3	2.9	1.5	0.0	100.0
Fall River	99.0	0.5	0.0	0.5	0.1	100.0
Lowell	97.6	0.9	0.7	0.7	0.1	100.0
New Bedford	92.7	6.6	0.3	0.3	0.1	100.0
Pittsfield	98.5	0.5	0.1	0.7	0.1	100.0
Salem	98.0	1.2	0.3	0.5	0.0	100.0
Springfield	88.0	6.5	4.9	0.5	0.1	100.0
Worcester	94.4	2.3	2.6	0.6	0.1	100.0
Balance Of State	96.4	1.2	1.4	0.8	0.1	100.0

** In Percent

VI. Labor Supply-Demand Imbalances

The Employment Service Automated Reporting System (ESARS) reported the occupations of 122,373 active applicants and 20,580 unfilled openings on file in all Massachusetts Job Matching Service Offices at the end of March 1981.

The data supplied by the ESARS System can be used in an analysis of labor supply and demand within the state. Especially useful in this type of analysis is the ratio of active applicants to unfilled job openings by occupation (Table 30). The ratios have been calculated to assist educational and manpower planners in pinpointing those occupations for which there is a demand. An occupational ratio greater than 3 to 1 may be considered as an occupation with a surplus of applicants, while an occupational ratio below 3 to 1 usually indicates high net demand occupations.

Before analyzing the data it is important to define some of the limitations of the ESARS system. The Job Bank openings refer only to positions listed within the Division of Employment Security. Unfortunately, a substantial number of job openings are never received by the Massachusetts Job Bank. Many job openings are filled by promotion from within a company. Many of Massachusetts' employers advertise their openings in local newspapers, or recruit through schools and private employment agencies, especially in the professional and technical fields. However, it should be noted that employers with federal government contracts are mandated by law to list certain openings with the Job Bank. In such cases some highly paid professional and technical positions, which might not otherwise be listed, would be included on the Job Bank. On the supply side some individuals may be more likely than others to use the Job Bank in seeking employment. Individuals seeking entry level employment such as youth and women reentering the workforce use the Job Matching Service in their job search efforts. Table 31 lists the characteristics of active applicants registered at job matching service centers.

In looking at the ratios of applicants to unfilled job openings, we see a wide disparity among the various occupations. Some shortages may exist because of a lack of qualified applicants, especially in the experienced professional and technical occupations. In other cases, employers may find that their positions go unfilled because of noncompetitive wages, unsuitable working conditions, transportation problems, etc. The occupations such as school teacher, in which there is large surplus of applicants, indicate a significant lack of job opportunities in the state for those seeking employment in those occupations.

Table 30
Active Applicants and Unfilled Job Openings
March 1981

Occupational Code, Category and Occupational Title	Total Applicants During 6 Months Ending 3/31/81	Total Active Applicants as of 3/31/81	Total Unfilled Job Openings as of 3/31/81	Ratio Of Active Applicants to Unfilled Job Openings as of 3/31/81
TOTAL	247,718	122,373	20,580	6/1
0-1 Professional, Technical and Managerial	35,517	15,616	2,470	6/1
Electronics Technician	418	204	33	6/1
Programmer, Business	273	128	22	6/1
Chemist	168	69	10	7/1
Counselor	995	410	29	14/1
Nurse, General Duty	261	151	134	1/1
Medical Assistant	190	98	0	--
Dental Assistant	283	153	8	19/1
Nurse, Licensed Practical	431	269	162	2/1
Faculty Member, College or University	276	113	16	7/1
Teacher, Secondary School	971	333	20	17/1
Teacher, Elementary School	985	323	2	162/1
Accountant	819	359	14	26/1
Purchasing Agent	332	178	12	15/1
Manager, Sales	691	322	11	29/1
Public Relations Repres.	346	141	11	13/1
Administrative Assistant	1,458	588	37	16/1
Manager, Office	667	294	5	59/1
Manager, Retail Store	1,350	635	31	20/1
Manager, Food Service	673	360	17	21/1
Security Officer	175	74	0	--
Caseworker	411	198	83	2/1
Social Group Worker	215	92	8	12/1
2 Clerical and Sales	59,533	26,252	4,186	6/1
Legal Secretary	538	262	22	12/1
Medical Secretary	283	155	6	26/1
Secretary	3,204	1,588	207	8/1
Clerk-Typist	2,822	1,479	350	4/1
Keypunch Operator	740	414	103	4/1
Typist	159	85	49	2/1
Survey Worker	309	79	70	1/1
File Clerk	858	566	27	21/1
Clerk, General	6,910	3,100	349	9/1
Mail Clerk	230	93	13	7/1
Bookkeeper (clerical)I Full Charge, General	1,473	731	32	23/1

Table 30
Active Applicants and Unfilled Job Openings
March 1981
(continued)

Occupational Code, Category and Occupational Title	Total Applicants During 6 Months Ending 3/31/81	Total Active Applicants as of 3/31/81	Total Unfilled Job Openings as of 3/31/81	Ratio Of Active Applicants to Unfilled Job Openings as of 3/31/81
2 Clerical & Sales(cont.)				
Bookkeeper (Clerical)II	607	302	18	17/1
Cashier (Clerical)I	1,273	666	33	20/1
Foreign Banknote Teller Trader	649	307	64	5/1
Cashier (Clerical)II	1,518	554	274	2/1
Computer Operator	638	299	24	12/1
Payroll Clerk	231	122	12	10/1
Accounting Clerk	956	437	33	13/1
Administrative Clerk	3,988	1,985	182	11/1
Stock Clerk	1,161	407	35	12/1
Telephone Operator	418	246	15	16/1
Receptionist	1,388	658	47	14/1
Teacher Aide II	595	293	12	24/1
Sales, Agent, Insurance	170	75	127	1/2
Salesperson, Women's Apparel & Accessories	320	144	24	6/1
Salesperson, Automobile General	290	136	7	19/1
Salesperson, General Merchandise	3,765	889	143	6/1
Salesperson, Parts	163	70	10	7/1
Sales Clerk	2,384	766	156	5/1
Sales Clerk, Food	521	185	65	3/1
Driver, Sales Route	388	177	10	18/1
Manager, Department	287	115	49	2/1
3 Services	39,065	20,918	4,134	5/1
House Worker, General	941	708	77	9/1
Counter Attendant, Luncheon or Coffee Shop	1,529	660	100	7/1
Cafeteria, Attendant	392	210	13	16/1
Bartender	943	533	9	59/1
Chef	294	151	5	30/1
Cook	1,081	514	78	7/1
Cook, Short Order	823	356	86	4/1
Cook	554	268	22	12/1

Table 30
Active Applicants and Unfilled Job Openings
March 1981

(continued)

Occupational Code, Category and Occupational Title	Total Applicants During 6 Months Ending 3/31/81	Total Active Applicants as of 3/31/81	Total Unfilled Job Openings as of 3/31/81	Ratio Of Active Applicants to Unfilled Job Openings as of 3/31/81
3 Services (continued)				
Meat Cutter	333	160	13	12/1
Cook Helper	153	85	0	--
Kitchen Helper	2,704	1,126	467	2/1
Cleaner, Housekeeping	610	368	66	6/1
Cosmetologist	411	300	2	150/1
Psychiatric Aide	340	121	243	1/2
Nurse Aide	3,846	2,423	167	15/1
Orderly	153	60	3	20/1
Food Service Worker, Hospital	437	221	83	3/1
Attendant, Children' Institutions	477	263	168	2/1
Nursery School Attendant	433	199	23	9/1
Presser, Machine	161	88	7	13/1
Guard, Security	1,194	528	296	2/1
Merchant, Patroller	506	208	86	2/1
Police Officer	160	79	1	79/1
Janitor	1,839	864	95	9/1
4 Agricultural, Fishery, Forestry & Related	3,997	2,118	1,434	1/1
Farmworker, Field Crop II	234	158	0	--
5 Processing	5,392	2,549	222	11/1
Injection-Molding Machine Tender	239	105	13	8/1
6 Machine Trades	17,043	8,020	773	10/1
Machinist	750	358	31	12/1
Machine Set-up Operator	227	102	10	10/1
Production Machine Tender	494	226	20	11/1
Automobile Mechanic	1,640	692	71	10/1
Airframes & Power Plant Mechanic	180	82	0	--
Diesel Mechanic	170	74	7	10/1
Maintenance Mechanic	505	247	25	10/1
Stitcher, Standard Machine	210	131	25	5/1

Table 30
Active Applicants and Unfilled Job Openings
March 1981

(continued)

Occupational Code, Category and Occupational Title	Total Applicants During 6 Months Ending 3/31/81	Total Active Applicants as of 3/31/81	Total Unfilled Job Openings as of 3/31/81	Ratio Of Active Applicants to Unfilled Job Openings as of 3/31/81
7 Benchwork	15,718	8,285	905	9/1
Electronics Inspector Systems-Quality Cont. I	196	110	5	22/1
Electronics Assembler	1,938	957	166	6/1
Electronics Inspector II Checker-Parts	195	102	8	13/1
Assembler, Electrical Accessories	316	160	29	6/1
Assembler, Small Prod.	374	193	11	18/1
Painter, Spray	159	79	8	10/1
Sewer, Hand	153	79	5	16/1
Sewing Machine Operator	867	471	88	5/1
Cementer, Hand	165	96	10	10/1
8 Structural Work	21,960	10,719	923	12/1
Sheet Metal Worker	328	171	43	4/1
Shipfitter	205	69	6	11/1
Automobile-Body Repairer	584	236	28	8/1
Welder, Combination	255	112	11	10/1
Electrician	340	146	64	2/1
Electronics Mechanic	312	155	8	19/1
Painter	1,128	609	22	28/1
Operating Engineer	334	188	2	94/1
Carpenter	1,661	794	41	19/1
Bricklayer	186	113	10	11/1
Pipe Fitter	160	77	1	77/1
Plumber	174	67	11	6/1
Plumber,Apprentice	196	80	1	80/1
Laborer, Construction or Leak Gang	196	89	3	30/1
Roofer	433	235	25	9/1
Construction Worker I	2,861	1,381	78	18/1
Maitenance, Repairer Building	1,503	712	80	9/1

Table 30
Active Applicants and Unfilled Job Openings
March 1981

(continued)

Occupational Code, Category and Occupational Title	Total Applicants During 6 Months Ending 3/31/81	Total Active Applicants as of 3/31/81	Total Unfilled Job Openings as of 3/31/81	Ratio Of Active Applicants to Unfilled Job Openings as of 3/31/81
9 Miscellaneous	34,566	16,391	2,295	7/1
Tractor-Trailer Truck Driver	1,254	647	7	92/1
Truck Driver, Heavy	2,579	1,327	28	47/1
Truck Driver, Light	1,710	798	30	27/1
Bus Driver	724	364	34	11/1
Taxi Driver	165	83	3	28/1
Automobile Service Station Attendant	575	256	45	6/1
Packager, Hand	3,814	2,116	142	15/1
Packager, Machine	358	177	12	15/1
Material Handler	10,747	5,030	339	15/1

Source: ESARS Table 96

Table 31
Characteristics of Active Applicants Registered At Job Matching Service Centers March 1981

	Active Applicants	
	Number	Percent
TOTAL	140,331	100.0
Age		
15 and Under	279	0.2
16-19	14,838	10.6
20-24	23,800	17.0
25-34	47,243	33.7
35-44	30,425	21.7
45-54	15,668	11.2
55-64	7,288	5.2
65 and Over	790	0.6
Sex		
Male	64,225	45.8
Female	76,106	54.2
Highest School Grade Completed		
0-7	8,323	5.9
8-11	47,229	33.7
12	55,977	39.9
Over 12	28,802	20.5
Residence		
Urban	125,833	89.7
Rural	14,498	10.3
Race/Ethnic Origin		
White (not Hispanic)	115,748	82.5
Black (not Hispanic)	13,958	9.9
Hispanic	9,088	6.5
All Others	1,537	1.1
Unemployment Claimants	42,999	30.6
State U.A.	40,859	29.1
Other Programs	2,140	1.5
Veterans	18,353	13.1
Recently Separated	4,279	3.0
Disabled	1,490	1.1
Vietnam Era	6,279	4.5
Handicapped	7,355	5.2
Physically Disabled	6,878	4.9
Mentally Retarded	179	0.1
Mentally Restored	298	0.2
Economically Disadvantaged	72,102	51.4
Food Stamp Work Registrant	10,411	7.4
Welfare Recipient	61,320	43.7
WIn Registrant	60,443	43.1
CETA Participant	813	0.6
Employment Status		
Working Full-time	8,604	6.1
Working Part-time	7,720	5.5
Not Working	124,007	88.4

Source: ESARS Table 6

VII. Individuals in Need of Employment Service

Individuals with low skill and educational levels are the most in need of manpower services. During periods of an economic recession many skilled and educated people also need manpower services. Skilled and educated workers are presumed to be able to find work on their own once the economic slowdown improves but the unskilled and under-educated will probably always need some form of assistance.

For many federally funded work force training programs, assistance is allocated to individuals on an income status basis. Poverty income levels and lower living standard income levels are established by the U. S. Department of Labor.

The Employment and Training Administration defines an economically disadvantaged person as someone who is a member of a family that 1) receives cash welfare payments; or 2) has a family income that, in relation to the family size and location, represents seventy percent of the lower living income levels issued by the department's Bureau of Labor Statistics, or poverty levels established by the Office of Management and Budget.

Table 32
Family Poverty Level Incomes

Size of Family Unit	One	Two	Three	Four	Five	Six
Nonfarm Family	$4,310	$5,690	$7,070	$8,450	$9,830	$11,210
Farm Family	3,680	4,850	6,020	7,190	8,360	9,530

For family units with more than six members, add $1,220 for each additional member in a nonfarm family, and add $1,030 for each additional member in a farm family

Table 33
Lower Living Standard Income Levels

Prime Sponsor (Metro)	Family Size					
	One	Two	Three	Four	Five	Six
Boston City	$5430	8890	12210	15080	17790	20800
EMHRDA Consortium	5430	8890	12210	15080	17790	20800
New Bedford Consortium	5160	8450	11600	14330	16900	19770
Hampden County **Csrt.**	5160	8450	11600	14330	16900	19770
Worcester Consortium	5160	8450	11600	14330	16900	19770
Salem Consortium	5430	8890	12210	15080	17790	20800
Lowell Consortium	5160	8450	11600	14330	16900	19770
Brockton Consortium	5430	8890	12210	15080	17790	20800
Fall River Consortium	5160	8450	11600	14330	16900	19770
Balance of State	5160	8450	11600	14330	16900	19770
Pittsfield Consortium	5160	8450	11600	14330	16900	19770

Table 34
70 Percent
Lower Living Standard Income Levels

Prime Sponsor (Metro)	Family Size					
	One	Two	Three	Four	Five	Six
Boston City	$3800	6230	8550	10550	12450	14560
EMHRDA Consortium	3800	6230	8550	10550	12450	14560
New Bedford Consortium	3610	5920	8120	10030	11830	13840
Hampden County Csrt.	3610	5920	8120	10030	11830	13840
Worcester Consortium	3610	5920	8120	10030	11830	13840
Salem Corsortium	3800	6230	8550	10550	12450	14560
Lowell Consortium	3610	5920	8120	10030	11830	13840
Brockton Consortium	3800	6230	8550	10550	12450	14560
Fall River Consortium	3610	5920	8120	10030	11830	13840
Balance of State	3610	5920	8120	10030	11830	13840
Pittsfield Consortium	3610	5920	8120	10030	11830	13840

The Not-Yet Poor Unemployed

In Fiscal Year 1982, displaced government workers including teachers and professors will be in need of job counseling to reconsider career alternatives or relocation. Not since the NASA-Defense layoffs of 1970 will the ranks of the experienced unemployed include so many white collar individuals. As in Space cutbacks, articulate, well-educated, and disillusioned professionals will need workshops on job search techniques. At first the job seekers will be stunned. Employers may react as they did in 1970 that these unemployed professionals will "go back to their old profession when things improve". A great number of the engineers and mathematicians who were displaced in 1970 found completely new career tracks to which they are committed and from which they cannot be enticed.

1980 CETA Eligibility Estimates for Selected Demographic and Targeted Groups

Massachusetts, Persons 14 years and older

April 1981

Table 35

Numbers in Thousands	Civilian Noninstitutional Population	Eligible for Title								
		IIB,VII	IID	YETP	YCCIP	SYEP	VI	Any Listed	Any Youth	Other Listed
Age in Years										
Total 14 years and older	4,620	491	419	92	52	139	426	556	177	504
14 to 15	204	31	19	-	-	31	19	31	31	31
14 to 19	666	89	59	65	52	103	59	139	139	98
Total 16 years and older	4,417	460	400	92	52	108	407	525	146	473
16 to 21	672	86	62	92	52	108	62	146	146	95
16 to 19	462	58	40	65	52	72	40	108	108	66
20 to 21	210	28	22	27	-	36	22	39	39	28
22 to 44	1,949	194	164	-	-	-	172	198	-	198
22 to 39	1,631	175	149	-	-	-	155	178	-	178
40 to 44	318	18	15	-	-	-	17	20	-	20
45 to 54	592	53	52	-	-	-	52	53	-	53
55 to 64	561	39	35	-	-	-	35	39	-	39
65 and over	643	88	87	-	-	-	87	88	-	88
Sex										
Male	2,213	193	152	52	33	76	157	225	97	197
Female	2,408	298	267	40	19	62	269	331	80	307
Race-Ethnicity										
White	4,425	453	389	82	50	124	394	515	162	465
White, not Hispanic	4,348	422	358	75	49	111	364	480	149	433
Black	148	38	29	9	2	15	31	39	15	38
Black, not Hispanic	139	32	25	9	2	13	26	33	13	32
Hispanic	86	36	35	7	1	15	35	39	15	38
Total minority	272	69	61	17	2	27	63	76	29	71
Economic Status										
≤ Poverty level	479	282	228	52	15	93	230	301	93	289
≤ Pov level or ≤70% LLSIL	573	328	254	64	18	111	257	348	111	335
≤70% LLSIL	548	321	250	62	17	109	253	341	109	328
>70% and ≤85% LLSIL	171	26	24	17	5	10	24	37	20	27
>85% and ≤100% LLSIL	242	16	16	-	5	-	21	26	5	21
>100% LLSIL	3,659	128	128	13	26	20	128	152	44	128
Years of School Completed										
Under 9 years	737	162	144	13	6	36	145	173	44	163
9 - 11 years	819	133	117	51	31	65	120	168	87	142
12 years	1,665	149	128	21	15	26	131	168	36	152
13 - 15 years	676	40	26	7	-	12	26	40	12	40
16 or more years	724	8	4	-	-	-	4	8	-	8

Source: University of Michigan

Table 36
Additional Planning Data Projections
Fiscal Year 1982

	Economically Disadvantaged 18 Years and Over		
	Statewide	Balance of State CETA Prime Sponsor (Including Yarmouth Subgrantee)	Balance of State CETA Prime Sponsor (Excluding Yarmouth Subgrantee)
TOTAL	472,509	184,369	173,875
White	412,847	176,870	166,911
Black	36,071	3,463	3,215
Other	23,591	4,036	3,749
Spanish	21,759	3,724	3,628

	Employed Part-time For Economic Reasons	
	Statewide	Balance Of State
Total	126,349	70,532
White Male	50,793	30,505
White Female	67,104	38,257
Nonwhite Male	3,727	818
Nonwhite Female	4,725	952

Source: University of Michigan

VIII. Training Opportunities for Massachusetts Labor Force

The outlook for employment and training programs for Massachusetts in Fiscal Year 1982 has been somewhat dampened by the impending Federal cutbacks in these areas. Some programs will be eliminated, while others will operate with considerably less money. Exactly what will be funded for training in Fiscal Year 1982 is not known at this time. Therefore, we will describe what is available as of March 1981. The goal of these programs are to train and improve the employability and productivity of the state's labor force.

A. Work Incentive Program (WIN)

The Work Incentive Program (WIN) was originally created by the 1967 amendments to the Social Security Act but was significantly changed by the 1971 Amendment to the Act. WIN is jointly administered by the U. S. Department of Labor and the U.S. Department of Health and Human Services through the state employment agencies all over the country.

The 1971 amendments mandated the requirements that all persons applying for or receiving Aid to Families with Dependent Children (AFDC) must register with the WIN program for employment or training as a condition of eligibility for AFDC. The WIN program is a major effort to help those people receiving AFDC to become productive workers. The program provides social, medical and childcare services and offers counseling, employability planning, work and training assignments, job placement and other assistance. The major emphasis of the program is putting individuals into immediate job placement rather than on counseling or extensive institutional training; thus, the AFDC recipients receive more emphasis on seeking employment rather than just receiving their AFDC welfare payment. The program is represented by 36 teams throughout Massachusetts.

An interesting aspect of the WIN program is the number of individuals in working registrants status. A working registrant is a sole parent who is employed more than 30 hours a week and who received an AFDC supplement to wages earned. They will be deregistered from the WIN program when their wages (after pay raises and promotions) reach a level which makes them ineligible to receive AFDC payments. Over 25 percent of WIN registrants are in working registrants status, an incremental approach to economic self-sufficiency. An additional four percent are in subsidized employment, are no longer receiving AFDC payments, and will be deregistered from the program.

B. Comprehensive Employment and Training Act (CETA)

The Comprehensive Employment and Training Act of 1973 was developed in Massachusetts to establish a new community employment service system to aid persons in job placement as well as providng them with training and other supportive services. There are eleven Prime Sponsors, ten of which represent consortia or municipalities based on the following cities: Boston, Cambridge, Fall River, Worcester, Springfield, Lowell, New Bedford, Brockton, Pittsfield, Salem, plus a sponsor - the Balance of State.

The CETA Act of 1973 was implemented in Massachusetts with the purpose of identifying and allotting funds to target groups which are experiencing job-related problems. Some of these target groups are the long-term unemployed, economically disadvantaged, ex-offenders, older workers, persons with a limited knowledge of the English language, and Vietnam-era Veterans.

CETA Eligibility Information

Title IIB: Services available under this Title include: Orientation, Assessment (including Testing), Classroom Occupational Training, On-the-Job Training, Work Experience, Individual Referral to short term public and private vocational training courses and job development. Basic Education, English as a Second Language and GED courses are also available, in combination with vocational training, for employability improvement. All of these services are designed to improve the employability of participants within relatively short periods of time. At this time, there are no provisions for remedial education or vocational training courses which would require a great length of time.

Eligibility:

Applicants must be:

1. Economically disadvantaged and unemployed or underemployed and a member of a significant segment.
2. Willing and able to participate in ES/CETA services programs.
3. Lacking a marketable skill.

Limits Participation:

1. No one can be in any CETA program longer than 2-2½ years in a five-year period.

2. No one can be in PSE longer than 78 weeks in a five-year period. There also is a waiver for on-board enrollees at the Secretary's discretion if a prime sponsor is having a extreme hardship in placing PSE enrollees in unsubsidized jobs, or if the area has 7 percent or more unemployment.

   PSE wages may not exceed $10,000 per year, adjusted upward by the ratio that local wage rates bear to national average, but not to exceed 20 percent of the maximum (no more than $12,000), with some exceptions. Further, average wages in each prime sponsor area may not exceed $7,200, adjusted by the ratio that the local wage bears to the national average.

Title III Special Federal Responsibilities:

Programs for persons who have a particular disadvantage in the labor market, including Native Americans, migrants and other seasonal farmworkers, the handicapped, women, displaced homemakers, public assistance recipients, and other special target groups.

Authorized welfare demonstration projects, projects for the middle-aged and older workers, and a program for better coordination between prime sponsors and state employment security agencies are included.

Title IV Youth Programs:

The Job Corps, Summer Youth Programs, and programs enacted in the Youth Employment and Demonstration Project Act of 1977 (except the Young Adult Conservation Corps which is still Title VIII), namely, Youth Incentive Entitlement Pilot Projects, and Youth Employment and Training Programs. The Job Corps and Summer Youth Programs are authorized for 4 years, and the 3 new Youth Programs for 2.

1. The Youth Employment Training Program (YETP): under the CETA Act, involves such services as classroom and on-the-job training, testing, placement, and work experience programs for youth ages 16 to 21, who meet certain low income criteria. The YETP pays firms to train young people in specific job-related skills.

2. Youth Incentive Entitlement Pilot Projects: The purpose of the Youth Incentive Entitlement Pilot Projects under the CETA Act is to test the impact on high school return, retention, and completion rates of a job guarantee for 16 to 19 year old disadvantaged youth who are in school or willing to return. The program provides wage subsidies for companies who offer new part-time jobs, or part-time jobs and training for these youth after school and during summer vacations. Participation of Massachusetts firms in this program encourages young people to complete their education and at the same time eases their transition into the work force.

3. Youth Community Conservation and Improvement Project: This is a CETA Program which seeks to employ 16-19 year olds in work projects which will benefit the community. Business, public and private agencies, schools, and other community based public organizations work together to design and operate subjects that provide youth with employment, work experience, skill training and opportunities for community service.

Title VII Private Sector Opportunities for the Economically Disadvantaged: Authorized a Private Sector Initiative Program (PSIP) to demonstrate the effectiveness of ways of increasing the involvement of the business community, including minority and small businesses,in employment and training activities supported by CETA, and increase private sector jobs for the economically disadvantaged.

Provides funds for the establishment of private industry councils (a majority of whose members must be from the business community) which shall participate with prime sponsors in developing opportunities for economically disadvantaged persons in the private sector.

C. Apprenticeship Programs:

Apprenticeship programs are conducted as a joint effort by employers and schools with related instruction given in vocational schools and junior colleges, sometimes utilizing home study courses. During the duration of the program, study records are kept and the training progress of the apprentices are frequently evaluated. All apprenticeship programs in the Commonwealth must be approved by and registered with the State Division of Apprentice Training.

Both men and women are eligible to apply, both must be at least 16 years of age. The applicants must be physically able to do the work of the trade. There are approximately 415 apprenticeable trades, many being specialized jobs within certain occupations.

D. Job Corps - How It Works

A national system of 60 residential centers in 31 States and Puerto Rico provides basic education, vocational training, counseling, health care, and similar renewal services to help disadvantaged young men and women, 16 through 21, prepare for jobs and for responsible citizenship.

Enrollees in Job Corps residential centers receive room and board, clothing for work and dress, books and other learning supplies, and a cash allowance, part of which is paid on leaving the program after satisfactory participation. A few of the centers can also accommodate young people who do not live on center but take training during the day. Enrollees may stay in Job Corps as long as 2 years, and at the end of their stay are given assistance in finding a job.

Training, often by skilled union workers, is given in such occupations as heavy equipment, auto repair, carpentry, painting, masonary, nursing and other health care jobs, clerical and office work, and electronic assembly. Basic education includes reading, mathematics, social studies, and preparation for the General Education Development (GED) high school equivalency examination.

INDIVIDUALS 03/31/81 MASSACHUSETTS STATE MASSACHUSETTS
SELECTED WIN ACTIVITY BY CHARACTERISTICS OF REGISTRANTS

ITEM NO	CHARACTERISTICS OF APPLICANTS	REGISTRANTS		ENTERED EMPLOYMENT			TAX CREDITS	DEREGISTRATIONS						
		CUMULATIVE TOTAL	ON HAND END OF PERIOD	TOTAL	PLACED	OBTAINED EMPLOYMENT	AUTHORIZED	EMP AFT. REG OFF AFDC	EMP VOL. NOT OFF. AFDC	NEVER AFDC RECIPIENT	EXEMPT	SANCTIONED	OFF AFDC OTHER	TOTAL
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
30010	AGE	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	1335
30015	15 AND UNDER	43	36	2	0	2	1	2	0	1	0	0	5	
30017	16-17	2618	2099	204	62	147	36	68	0	18	74	15	380	55
30018	18-19	1725	1172	126	40	89	32	82	0	22	44	10	413	56
30020	20-21	1541	1178	189	48	143	42	94	3	38	52	6	218	40
30025	22-24	4046	3165	481	112	379	90	170	6	70	125	19	574	95
30030	25-29	11887	9826	1273	231	1051	235	402	12	169	283	54	1326	223
30035	30-34	16092	13646	1530	246	1303	210	427	3	164	363	35	1659	264
30037	35-39	13994	11905	1293	187	1117	173	333	0	134	313	36	1439	224
30040	40-44	9420	7989	693	118	583	98	210	0	96	189	19	1034	154
30045	45-54	9389	7706	568	88	488	63	220	0	101	247	20	1193	176
30050	55-64	2104	1703	68	13	55	11	28	0	18	69	2	297	41
30055	65 AND OVER	140	114	4	0	4	0	2	0	0	2	0	22	2
30060	SEX	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	1335
30065	MALE	17457	12778	1941	403	1563	419	1191	1	499	264	104	3053	506
30070	FEMALE	55541	47761	4490	740	3798	572	847	23	332	1497	112	5507	828
30075	HIGHEST SCHOOL GRADE	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	1335
30080	0-7	6622	5568	352	92	268	82	121	0	72	234	23	685	112
30085	8-11	30437	25203	2490	485	2030	430	766	6	297	816	127	3629	561
30090	12	27907	23278	2679	459	2256	377	800	13	323	579	51	3225	496
30095	OVER 12	8032	6490	910	107	807	102	351	5	139	132	15	1021	165
30100	RACE/ETHNIC	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	1335
30105	WHITE (NOT HISPANIC)	54633	44524	5375	957	4477	818	1784	22	692	1238	147	7061	1087
30110	BLACK (NOT HISPANIC)	10887	9711	678	92	591	86	122	1	65	280	18	762	124
30112	HISPANIC	7034	5942	353	91	271	83	121	1	73	238	51	669	114
30115	AMERICAN INDIAN & ALASKAN NATIVE	87	69	3	0	3	1	3	0	0	2	0	16	21
30120	ASIAN & PACIFIC ISL.	248	200	19	2	17	2	6	0	0	2	0	40	48
30125	INA	109	93	3	1	2	1	2	0	1	1	0	12	16
30127	FAMILY SIZE	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	13352
30128	1-2	15935	13425	1743	318	1448	256	360	15	179	509	49	1663	2757
30129	3-4	46582	38631	3713	634	3117	555	1269	9	466	916	106	5703	8422
30130	5-8	10162	8206	959	187	784	175	405	0	185	323	59	1170	2129
30131	9 OR MORE	319	277	16	4	12	5	4	0	1	13	2	24	44
30135	FOOD STAMP WORK REG.	678	161	61	9	54	16	20	0	20	7	8	59	113
30140	EMPLOYMENT STATUS	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	13352
30145	FULL TIME	6464	5580	497	87	413	91	260	4	87	61	3	560	972
30150	PART TIME	5670	4950	491	60	437	53	142	1	76	72	4	515	806
30155	NOT WORKING	60864	50009	5443	996	4511	847	1636	19	668	1628	209	7485	11574
30160	JOB ATTACHMENT	379	293	40	4	36	4	14	0	14	2	0	65	94
30165	APPLICANTS FOR AFDC	13407	3722	511	64	447	27	22	1	437	156	13	590	1217
30170	MANDATORY	12741	3569	492	61	431	26	22	-	435	141	13	569	1178
30171	UNEMPLOYED PARENTS	2962	518	121	17	104	3	7	-	235	15	5	145	406
30175	VOLUNTARY	675	153	19	3	16	1	0	1	2	15	0	22	40
30180	RECIPIENTS	68295	56817	5948	1081	4932	964	2016	23	-	1607	203	7977	12179

MONTHLY YEAR TO DATE
FOR PERIOD ENDING 03/31/81

INDIVIDUALS 03/31/81 MASSACHUSETTS STATE MASSACHUSETTS
SELECTED WIN ACTIVITY BY CHARACTERISTICS OF REGISTRANTS

ITEM NO	CHARACTERISTICS OF APPLICANTS	REGISTRANTS		ENTERED EMPLOYMENT			TAX CREDITS	DEREGISTRATIONS							
		CUMULATIVE TOTAL	ON HAND END OF PERIOD	TOTAL	PLACED	OBTAINED EMPLOYMENT	AUTHORIZED	EMP AFT REG OFF AFDC	EMP VOL NOT OFF AFDC	NEVER AFDC RECIPIENT	EXEMPT	SANCTIONED	OFF AFDC OTHER	TOTAL
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
30185	MANDATORY	64356	53505	5609	991	4679	897	1967	-	-	1343	203	7617	11479
30186	UNEMPLOYED PARENTS	8240	5862	1178	229	959	234	816	-	-	140	63	1263	2391
30190	VOLUNTARY	4107	3312	339	90	253	66	48	22	-	264	0	361	700
30195	PREVIOUS WIN REGISTRANT	15678	13170	1526	261	1286	245	519	3	153	355	69	1690	2770
30196	DEREGISTERED FOLLOWING EMPLOY	1466	1118	264	53	216	70	140	1	43	19	21	177	392
30200	PLACED	1143	-	-	-	-	302	204	4	2	15	3	67	292
30205	OBTAINED EMPLOYMENT	5363	-	-	-	-	272	772	9	13	29	8	331	1154
30210	TOTAL MANDATORY	68878	-	-	-	-	-	-	-	-	-	-	-	-
30215	UNEMPLOYED PARENTS	9112	-	-	-	-	-	-	-	-	-	-	-	-
30220	TOTAL VOLUNTEERS	4300	-	-	-	-	-	-	-	-	-	-	-	-
30225	SERVICES PROVIDED	1692	-	263	52	214	-	53	6	9	102	16	163	347
30230	CHILD CARE	1272	-	209	44	167	-	31	6	7	67	11	116	236
30235	HOMEMAKER SERVICES	0	-	0	0	0	-	0	0	0	0	0	0	0
30240	WIN SAU MEDICAL EXAMINATION	132	-	18	4	14	-	5	0	2	27	3	8	45
30245	FAMILY PLANNING	3	-	0	0	0	-	0	0	0	1	0	0	1
30250	HOME AND FINANCIAL MANAGEMENT	11	-	0	0	0	-	1	0	0	1	0	0	2
30255	COUNSELING	183	-	24	2	22	-	6	0	0	2	1	22	31
30260	HOUSING IMPROVEMENT	21	-	5	2	4	-	2	0	1	0	0	3	6
30265	TRANSPORTATION TO SERVICES	10	-	3	0	3	-	0	0	0	0	0	3	3
30270	EMERGENCY INTERVENTION	4	-	0	0	0	-	0	0	0	0	0	2	2
30275	REMEDIAL MED/DENTAL	60	-	5	1	4	-	7	0	0	4	1	9	21
30280	VOC REHABILITATION	11	-	1	0	1	-	1	0	0	0	0	1	2
30285	STATE USE I	4	-	0	0	0	-	0	0	0	0	0	0	0
30290	STATE USE II	0	-	0	0	0	-	0	0	0	0	0	0	0
30295	FEDERAL USE	0	-	0	0	0	-	0	0	0	0	0	0	0

MASSACHUSETTS 25

MONTHLY YEAR TO DATE
FOR PERIOD ENDING 03/31/81

INDIVIDUALS 03/31/81 MASSACHUSETTS STATE MASSACHUSETTS

ENTRANCE TO EMPLOYMENT BY SERVICES RECEIVED

ITEM NO	EMPLOYMENT CATEGORIES AND OTHER ITEMS	TOTAL	ENTERED EMP APPLICANTS	ENTERED EMPLOY			ENTERED EMPLOYMENT FROM:				MANDATORY	MINORITY		
				EMP AND TRNG COMP	NO COMP PARTICIPATION	OJT	PSE	SUSPENSE TO EMPLOYMENT	IES	IES/GROUP JOB SEEKING ACTIV.		FEMALE	UNDER 18	EDUC. LESS THAN 12
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
31010	ENTERED EMPLOYMENT	6431	511	1421	4527	186	0	76	72	373	6075	825	16	562
31015	30 DAYS OR MORE	6393	508	1414	4498	186	0	76	72	369	6039	821	15	560
31020	PLACED	1121	63	370	690	160	0	8	36	14	1029	141	5	107
31025	OBTAINED EMPLOYMENT	5342	445	1070	3844	26	0	68	36	355	5075	691	11	463
31030	FULL TIME	4756	358	1214	3200	183	0	70	52	333	4499	624	14	445
31035	PART TIME	1713	150	217	1346	3	0	6	20	38	1609	204	2	121
31040	LESS THAN 30 DAYS	47	3	10	34	0	0	0	0	4	45	4	1	3
31042	DEREGISTERED FOLLOWING EMPLOYMENT	264	28	49	189	8	0	4	0	14	261	15	1	17
31045	MANDATORY	6075	492	1313	4296	169	0	73	67	349	6075	771	16	541
31050	UNEMPLOYED PARENTS	1294	121	310	868	67	0	11	5	109	1294	8	1	71
31055	VOLUNTARY	356	19	108	231	17	0	3	5	24	0	54	0	21
31060	MALE	1941	190	458	1302	89	0	13	19	160	1929	0	9	119
31065	FEMALE	4490	321	963	3225	97	0	63	53	213	4146	825	7	443
31070	AGE	6431	511	1421	4527	186	0	76	72	373	6075	825	16	562
31072	15 AND UNDER	2	0	0	2	0	0	0	0	0	2	0	0	0
31075	16-17	204	21	32	152	1	0	3	6	3	202	7	16	16
31079	18-20	190	22	35	133	8	0	2	1	11	161	12	0	15
31080	21-44	5395	411	1234	3775	165	0	63	61	321	5080	713	0	452
31085	45 AND OVER	640	57	120	465	12	0	8	4	38	630	93	0	79
31090	HIGHEST SCHOOL GRADE COMPLETED	6431	511	1421	4527	186	0	76	72	373	6075	825	16	562
31095	0-7	352	15	73	264	14	0	2	11	16	347	104	1	126
31100	8-11	2490	190	576	1733	70	0	33	36	172	2394	339	15	436
31105	12	2679	211	580	1902	82	0	33	19	143	2492	276	0	0
31110	OVER 12	910	95	192	628	20	0	8	6	42	842	106	0	0
31111	FAMILY SIZE	6431	511	1421	4527	186	0	76	72	373	6075	825	16	562
31112	1-2	1743	143	392	1219	47	0	23	20	102	1559	252	3	110
31113	3-4	3713	293	807	2628	113	0	41	38	199	3558	458	9	326
31114	5-8	959	72	219	670	26	0	11	14	72	942	114	4	125
31115	9 OR MORE	16	3	3	10	0	0	1	0	0	16	1	0	1
31117	UNDER $3.10	207	14	19	174	0	0	0	3	4	195	12	0	7
31120	$3.10 - $3.34	1392	124	209	1061	6	0	11	20	35	1306	161	7	123
31125	$3.35 - $3.49	1040	62	193	786	9	0	7	11	77	987	153	5	104
31130	$3.50 - $3.99	1402	89	358	957	46	0	23	19	80	1290	258	3	173
31135	$4.00 - $4.49	979	65	294	620	50	0	19	8	72	915	120	2	81
31140	$4.50 AND OVER	1589	157	400	1035	75	0	16	11	111	1543	146	0	95
31145	COMPONENTS ENTERED	1421	-	1421	-	-	-	-	-	-	-	204	4	153
31150	IES	110	-	110	-	-	-	-	-	-	-	27	2	28
31155	IES/GROUP JOB SEEKING ACTIVITY	463	-	463	-	-	-	-	-	-	-	54	1	41
31160	INSTITUTIONAL	113	-	113	-	-	-	-	-	-	-	22	0	13
31165	WORK EXPERIENCE	131	-	131	-	-	-	-	-	-	-	23	0	17

MASSACHUSETTS 25

MONTHLY YEAR TO DATE
FOR PERIOD ENDING 03/31/81

Table 39
Followup Distribution of Selected Vocational-Technical School Graduates
Class of 1980

Schools	Number Of Graduates	2 Year Public College	4 Year Public College	2 Year Private College	4 Year Private College	Nurses Training	Other Post Secondary	Military	Work	Other	Information Not Available
C.H. Patten Voc.High (Beverly)	72	1	1	0	0	0	0	7	63	0	0
Boston Tech. High	294	5	62	24	98	0	18	24	61	2	0
Chicopee Comprehensive H.S.	423	76	51	8	47	4	10	18	195	14	0
Holyoke Trade High School	52	0	0	0	0	0	0	7	44	1	0
Leominster Trade High School	53	1	0	2	0	0	0	2	48	0	0
Voc. Tec. Inst. (Lynn)	298	19	18	0	0	0	8	14	160	4	75
Medford Voc. Tech. Hich School	106	2	1	6	0	0	0	2	94	1	0
Peabody Voc. High	70	0	0	0	0	0	11	0	59	0	0
Taconic High (Pittsfield)	268	88	30	8	42	1	8	11	69	11	0
Pittsfield Vocational	133	18	2	0	1	0	1	18	93	0	0
Quincy Voc. Tech.	210	14	5	8	10	2	2	8	147	1	13
Somerville Tech. Trade High	62	0	0	0	1	0	0	3	51	7	0
H.S. Of Commerce (Springfield)	383	78	18	8	34	0	13	24	189	8	11
Technical High (Springfield)	265	52	33	10	16	5	2	40	107	0	0
Putnam Voc. Tech. (Springfield)	272	19	2	3	1	0	0	33	212	2	0
Waltham Voc. High	165	10	6	16	10	13	0	9	86	0	15
Westfield Voc. High	72	8	0	0	0	0	0	4	59	1	0
Weymouth Voc. Tech. High	95	1	3	3	6	0	6	7	69	0	0
Smith Voc. Agr. High (Northampton)	126	15	0	0	0	0	0	17	69	25	0
Worcester Trade Complex	313	38	16	8	0	8	7	51	176	3	6
Dighton Rehoboth Rec. Voc.	223	18	40	3	37	1	9	11	104	0	0
Tantasqua Reg. Voc.(Sturbridge)	27	2	1	0	0	0	0	2	18	4	0
Assabet Valley Voc. High (Marlborough)	292	11	15	11	4	14	7	13	204	13	0

Table 39
Followup Distribution of Selected Vocational-Technical School Graduates
Class of 1980
(continued)

Schools	Number Of Graduates	2 Year Public College	4 Year Public College	2 Year Private College	4 Year Private College	Nurses Training	Other Post Secondary	Military	Work	Other	Information Not Available
Blackstone Voc. Tech. (Upton)	168	19	2	8	2	0	1	17	97	22	0
Blue Hills Reg. Voc. Tech. (Canton)	302	68	8	14	8	0	4	14	161	16	9
Bristol Plymouth Voc. Tech. (Taunton)	161	4	0	2	5	2	4	18	116	10	0
Cape Cod Reg. Voc. Tech. (Harwich)	168	15	0	6	2	0	5	15	121	0	4
Franklin County Tech. (Turner Falls)	154	0	1	13	0	0	1	4	123	6	6
Dimar-Reg. Tech. (Fall River)	216	6	15	4	2	0	2	15	171	1	0
Gr. Lawrence Reg. Voc. Tech. (Andover)	360	34	23	4	0	2	3	4	283	5	2
Gr. New Bedford Reg. Voc. Tech. (New Bedford)	319	20	9	3	2	1	10	19	255	0	0
Gr. Lowell Reg. Voc. Tech. (Tyngsborough)	482	20	3	8	2	14	11	21	392	11	0
Jos. P. Keefe Tech. (Framingham)	220	3	6	3	9	0	9	13	174	3	0
Minuteman Voc. Tech. (Lexington)	227	12	10	12	7	0	20	13	131	22	0
Montachusett Voc. Tech.(Fitchburg)	192	9	5	1	1	0	4	8	163	1	0
Charles H. McCann Tech. No. Adams)	100	18	7	2	0	0	3	6	63	1	0
Northeast Metro Reg. Voc. (Wakefield)	204	2	6	7	11	0	1	2	235	16	4

Table 39
Followup Distribution of Selected Vocational-Technical School Graduates
Class of 1980
(continued)

Schools	Number Of Graduates	2 Year Public College	4 Year Public College	2 Year Private College	4 Year Private College	Nurses Training	Other Post Secondary	Military	Work	Other	Information Not Available
Northshore Reg, Voc. (Beverly)	169	6	0	0	3	0	14	17	129	0	0
Old Colony Reg. Voc. (Rochester)	103	10	2	2	5	0	0	1	81	2	0
Pathfinder Voc. Tech. (Palmer)	57	5	0	1	0	0	0	2	49	0	0
Shawsheen Valley Voc. Tech. (Billerica)	354	9	4	2	6	0	0	13	293	17	10
Southeastern Reg. Voc. Tech. (South Easton)	247	11	7	10	2	5	6	15	172	19	0
South Shore Voc. Tech. (Hanover)	65	3	3	0	4	0	0	10	45	0	0
Bay Path Voc. High (Worcester)	188	0	20	0	0	0	0	25	83	7	53
Upper Cape Cod Voc. Tech. (Bourne)	117	9	6	4	0	1	7	9	72	9	0
Whittier Reg. Voc. (Haverhill)	363	8	8	12	4	17	25	7	267	10	5
Total	9290	767	449	236	382	90	232	593	6053	275	213
Percent of Distribution	100.0	8.3	4.8	2.5	4.1	1.0	2.5	6.4	65.1	3.0	2.3

Source: Massachusetts Department of Education

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Skill Training Centers

City or Town	Name Of Institution	Telephone	Training Program
Attleboro	Attleboro Voc. Tech High School	(617)223-5050	Jewelry Skill Training
Amherst	Univ. of Mass.	(413)545-2132	Residential Energy Auditing, Passive Solar Design, Real Estate Appraisal, Real Estate Certification
Bedford	Middlesex Collunity College	(617)275-8910	Technical Writing,Electro-mechanical Drafting, Career Transition, Word Processing, Entry/Reentry to the Job Market
Beverly	North Shore Community College	(617)427-4580 ext. 318	Materials Management for Technicians (electrical or mechanical), Machine Operator
Billerica	Shawsheen Valley Voc. High School	(617)667-2111	Cobol Programming, Electronic Technician/Computer Operator, Word Processing
Boston	Boston State College	(617)731-3300 ext. 110,101	Paralegal Studies, Computer Science and Information Processing, Public Accounting
Boston	CETA	(617)725-3665	Clerical, Keypunch Computer/ Elec. Tech., Multi-lingual Accounting, Food Service, Welding, Machine-Tool, Automotive
Bridgewater	Bridgewater State College	(617)697-8321 ext. 231	Accounting, Computer Science, Paralegal Studies, Advertising, Retail Management
Brockton	CETA	(617)588-8951	Building Maintenance, Electronic Assembler, ESL (English as a second language), Clerk-typist, Machine and Auto Mechanics

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Skill Training Center
(continued)

City or Town	Name Of Institution	Telephone	Training Program
Cambridge	CETA	(617)357-9510 ext. 301	Clerical Training for the Handicapped
Chelsea	CETA	(617)884-1755 ext. 234	Diesel Mechanic, Machine Operator, Electronics
Fall River	Bristol Community College	(617)678-2811 ext. 279	Computer Operations, and Maintenance, Computer Programming, Electro-Mechanical Drafting, Clerical Upgrading Program, ESL (English as a second language)
Fitchburg	CETA	(617)632-3193	Business Tech., Computer Operator
Fitchburg	Fitchburg State College	(617)345-2343	Certificate Programs in Computer Hardware, Microprocessors, Plastic Technology and Technical Writing
Framingham	Framingham State College	(617)620-1441	Computer Programming
Haverhill	Northern Essex Community College	(617)374-0721 ext. 245	Computer Programming, Accelerated Business, Electronic Tester Training
Holyoke	Holyoke Community College	(413)538-7000	Clerical Skills, Data Processing
Hopedale	CETA	(617)473-3972	Secretarial and Clerical Training
Lawrence	Lawrence Public Schools	(617)682-9020	Metal Fabrication

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Skill Training Center
(continued)

City or Town	Name Of Institution	Telephone	Training Program
Lexington	Minuteman Tech.	(617)861-6500 ext. 230	Florist shop training, Word Processing, Phototypesetting, Mechanical Paste-up Artist, Electronics Test Technician, Drafting, Data Processing, Training for Medical, Dental and other Health Occupations
Lowell	Greater Lowell Reg. Voc. Tech.	(617)454-5411	Electronics Technicians
Marlborough	Assabet Valley Reg. Voc. School	(617)485-9430 ext. 29	Computer Programming, Drafting Electronics, Secretarial
Natick	Natick H.S.	(617)653-0550	Word Processing
New Bedford	CETA	(617)999-3161	Clerical Skills Training, Jr. Accounting, Nurse's Aide, Basic Education, ESL (English as a second language), Machine shop Occupations, Carpentry/Bldg. Maintenance, Auto-Mechanics, Welding, Drafting, Boat Building, Basic Elect. Program
Newton	Newton H.S.	(617)552-7590	Electromechanical Drafting
Oxford	Oxford H.S.	(617)987-0246	Computer Programming, Word Processing, Electronic Technology, Electronics Assembly
Pittsfield	CETA	(413)499-2220	Carpentry, Welding, Food Services, Auto Body, Homemaker/ Health Adie, Child Care

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Skill Training Center
(continued)

City or Town	Name Of Institution	Telephone	Training Program
Salem	CETA	(617)745-9280	Janitoral Svcs. Career Development Program, Health Aide, Med. Sect.,Acct Bookkeeping,Admin. Asst., Jr Acct., Adm. Sec., Auto Mech. Elec.Assembly/Insp., Data En Bus. Office Prod., Elec. Tec I., Elec. Tech II, Manuf. Tec., Machine Operator
Southbridge	CETA	(617)765-5404	Machine Shop Skills
Springfield	Springfield Community College	(413)781-7822	Environmental Technology, Electronics, Machine Operato Secretary/Clerical
Upton	Blackstone Valley Reg. Voc. School	(617)529-7771	Machine-Tool Operator
Wellesley	Mass. Bay Community Coll.	(617)237-1100 ext. 214	Word Processing Concepts, Office Skills, Medical Records
Westfield	Westfield State College	(413)568-3311 ext. 228	Writing Proficiency, Computer Science, Occupational Education Administration, Training for Vocational Inst. of Special Needs Students, Bilingual Vocational Educatio
Worcester	Worcester State College	(617)752-7700 ext. 307	Review for ASHA(American Speech-Hearing Assoc.) Certification Exam., Alternatives Teaching, Career Seminar, Skills for Math. Success
Worcester	Career Educ. Training Ctr. CETC	(617) 757-5636	Patient Care, Computer Technician, Cooking, Business Skills Training, Med. Records Machine Skills Training

APPENDIX

Massachusetts Accession Rates
1980

Item	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1980 Annual Average
TOTAL MANUFACTURING	4.0	3.5	3.7	3.2	3.4	4.2	3.2	3.9	3.8	3.3	2.6	2.2	3.4
Durable Goods	3.6	2.7	2.9	2.6	2.7	3.5	2.3	2.8	2.9	2.2	1.9	1.6	2.6
Lumber & Wood Prod.	7.8	3.9	6.8	6.4	5.7	3.9	4.5	8.6	4.0	4.4	4.1	2.3	5.2
Furniture & Fixtures	3.9	4.4	3.1	3.6	5.7	2.8	6.5	3.0	5.8	3.4	3.5	2.4	4.0
Stone,Clay & Glass	1.4	0.8	1.3	2.1	2.6	2.3	1.0	0.7	1.0	1.7	1.4	0.5	1.4
Primary Metal Prod.	2.9	2.8	4.4	1.8	1.7	2.0	1.7	3.2	3.1	2.7	2.0	1.6	2.5
Fabricated Metal Prod.	3.9	3.2	3.7	2.7	3.1	3.0	2.4	3.2	3.0	2.7	2.5	1.7	2.9
Machinery exc. Elec.	4.3	2.1	2.0	2.3	2.1	2.8	1.9	2.3	2.4	2.1	1.5	1.3	2.3
Electrical Machinery	3.7	3.6	3.5	3.4	2.9	4.6	2.4	2.8	2.7	1.8	1.7	1.4	2.9
Transportation Equip.	2.6	2.4	2.2	1.6	1.4	2.2	3.0	4.5	2.6	1.7	1.7	1.4	2.3
Instruments & Rel. Prod.	3.0	2.0	2.4	2.0	3.3	5.0	1.9	2.0	3.9	2.9	2.5	2.4	2.8
Nondurable Goods	4.6	4.6	4.9	4.0	4.6	5.2	4.8	5.7	5.2	4.9	3.6	3.1	4.6
Food & Kindred Prod.	4.3	3.3	3.8	4.1	5.2	8.1	7.6	7.8	6.0	9.2	2.9	4.5	5.6
Textile Mill Prod.	6.2	6.2	5.9	5.1	5.1	5.9	7.3	6.2	5.9	5.0	4.4	4.8	5.7
Apparel	5.0	5.7	5.1	4.5	3.7	3.8	3.6	4.9	4.7	4.0	5.3	2.0	4.4
Paper & Allied Prod.	2.5	1.9	3.0	1.9	2.4	3.0	1.7	2.6	2.6	2.5	2.1	2.1	2.4
Printing & Publishing	3.5	3.4	4.0	2.6	4.3	5.2	2.8	2.6	4.1	3.7	3.6	3.2	3.6
Chemicals & Allied Prod.	1.4	1.6	2.8	1.1	1.3	2.5	1.7	0.7	0.7	1.2	0.7	0.7	1.4
Rubber & Plastics n.e.c.	5.9	5.8	6.4	5.9	6.0	6.1	7.0	8.4	9.0	7.0	4.5	4.0	6.3
Leather & Leather Prod.	9.7	8.2	8.3	7.7	8.8	7.4	8.2	13.4	8.0	7.3	5.1	4.9	8.1
Misc. Nondurable Goods	3.6	5.1	4.7	3.8	4.6	5.5	5.4	6.7	5.3	4.2	2.3	2.4	4.5

Source: Occupation/Industry Research Department

Massachusetts Separation Rates
1980

Item	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1980 Annual Average
TOTAL MANUFACTURING	3.8	3.1	3.3	3.7	3.9	3.6	3.9	5.2	3.8	3.4	2.8	2.9	3.6
Durable Goods	2.9	2.4	2.6	3.1	3.2	3.0	2.7	4.6	2.8	2.3	1.7	1.8	2.8
Lumber & Wood Prod.	4.9	3.4	4.7	4.2	5.2	4.3	12.6	6.9	6.1	5.0	4.4	4.2	5.5
Furniture & Fixtures	6.4	3.3	2.9	5.9	3.9	5.6	12.1	5.3	4.5	3.6	5.5	8.2	5.6
Stone, Clay & Glass	2.5	1.7	1.8	1.8	1.5	1.3	2.6	4.1	2.7	1.1	0.9	1.5	2.0
Primary Metal Prod.	3.6	3.1	2.1	3.1	4.2	3.0	4.1	3.1	3.2	3.0	1.6	2.0	3.0
Fabricated Metal Prod.	3.7	3.2	3.1	4.5	4.0	3.4	3.1	4.0	2.9	2.6	2.5	2.2	3.3
Machinery exc. Elec.	1.9	1.9	1.9	2.2	2.4	3.5	1.8	2.8	2.3	2.1	1.5	1.2	2.1
Electrical Mach.	3.2	2.6	3.2	2.8	3.3	2.4	2.4	3.5	2.9	2.2	1.2	1.6	2.6
Transportation Equip.	2.6	2.4	4.0	4.0	3.3	4.2	2.0	13.6	2.8	2.6	1.7	1.7	3.7
Instruments & Rel. Prod.	2.8	2.2	1.8	3.2	3.7	2.3	2.7	5.6	2.5	2.1	1.4	1.5	2.7
Nondurable Goods	5.1	4.1	4.4	4.6	4.9	4.6	5.7	6.0	5.3	4.9	4.4	4.7	4.9
Food & Kindred Prod.	5.3	3.9	5.1	5.2	4.9	5.2	8.2	6.3	4.1	3.6	3.6	6.4	5.2
Textile Mill Prod.	7.5	5.8	4.8	5.8	7.5	5.5	8.3	7.5	6.5	6.3	5.3	4.3	6.3
Apparel Prod.	4.3	3.3	4.7	4.1	4.1	3.3	4.6	5.1	5.2	5.8	4.5	2.7	4.3
Paper & Allied Prod.	2.5	2.8	2.9	2.3	3.4	2.5	2.5	3.8	3.8	2.6	2.0	1.7	2.7
Printing & Publishing	4.2	3.1	3.1	3.0	3.7	4.0	3.5	4.4	4.1	3.6	2.5	3.9	3.6
Chemicals & Allied Prod.	1.1	1.2	1.1	2.4	1.9	1.8	1.9	2.7	2.0	1.3	1.0	1.5	1.7
Rubber & Plastics n.e.c.	6.5	5.1	5.0	7.4	7.5	7.8	6.9	9.7	8.4	8.3	5.0	3.8	6.8
Leather & Leather Prod.	8.5	6.3	7.9	8.1	7.7	6.8	12.7	9.1	9.1	9.7	7.0	17.7	9.2
Misc. Nondurable Goods	6.6	5.7	5.3	4.5	4.2	4.5	6.1	6.4	4.9	3.8	9.7	4.5	5.5

Source: Occupation/Industry Research Department

Average Weekly Hours
Manufacturing Production Workers
1980

Industry	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average
MANUFACTURING	40.2	39.8	39.7	39.8	39.4	39.8	39.1	39.5	39.7	39.2	39.3	40.2	39.6
Durable Goods	41.4	40.8	40.4	40.7	40.2	40.7	39.8	40.4	40.6	40.3	40.5	41.5	40.6
Lumber & Furniture	38.8	37.8	37.1	37.7	37.7	38.4	38.9	38.2	37.5	37.6	37.6	38.1	38.0
Primary Metals	42.7	42.7	43.3	42.1	40.1	41.6	38.5	41.2	42.3	40.3	41.9	42.9	41.6
Fabricated Metals	40.8	40.0	40.3	40.3	39.4	40.1	38.5	39.3	40.3	38.8	39.6	40.2	39.6
Machinery (exc. Elec.)	42.6	41.5	41.6	41.9	41.6	42.2	40.8	42.0	42.5	41.7	42.1	43.1	42.0
Electrical Machinery	40.7	42.0	39.9	40.5	40.1	39.8	40.5	40.6	40.7	40.5	39.7	41.4	40.5
Transportation Equip.	40.7	39.0	39.2	39.3	38.4	40.3	38.8	38.2	40.3	38.9	39.1	41.0	39.4
Instruments	41.8	39.7	39.8	40.3	40.4	40.9	40.0	39.6	37.9	40.7	41.9	42.1	40.4
Stone, Clay & Glass*	40.8	39.9	40.0	40.7	40.8	40.5	39.7	39.3	39.4	39.7	38.4	39.7	39.9
Nondurable Goods	38.7	38.4	38.8	38.6	38.2	38.5	38.2	38.3	38.6	37.7	37.7	38.4	38.3
Food	39.0	38.8	38.6	38.0	38.4	38.6	38.6	38.7	39.3	38.6	37.4	38.1	38.5
Textiles	40.7	40.7	41.9	40.9	40.2	40.7	39.2	40.3	40.4	39.0	39.3	40.3	40.3
Apparel	33.0	33.4	34.4	34.7	34.1	34.6	35.1	34.1	33.8	31.8	30.1	32.7	33.5
Paper & Allied Prod.	44.1	43.7	43.6	43.1	42.4	41.9	41.8	41.6	42.8	42.9	43.6	45.5	43.1
Printing	37.3	36.8	37.5	37.0	36.5	37.2	36.5	37.6	38.4	36.7	38.0	39.2	37.4
Chemicals	41.9	41.9	42.4	42.6	42.0	42.0	40.5	40.1	40.4	40.5	42.0	42.6	41.6
Rubber	40.7	40.1	40.6	40.3	39.8	39.4	40.3	40.8	40.2	39.7	40.2	41.2	40.3
Leather	36.4	36.3	35.5	36.2	36.4	37.0	34.7	35.8	36.4	35.8	35.6	35.4	36.0

Source: Current Employment Survey

* Stone, Clay and Glass not listed in correct SIC code order

Average Hourly Earnings
Manufacturing Production Workers
1980

Industry	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average
Manufacturing	$6.26	$6.29	$6.36	$6.38	$6.44	$6.41	$6.49	$6.51	$6.63	$6.70	$6.78	$6.83	$6.51
Durable Goods	6.57	6.60	6.66	6.70	6.75	6.69	6.76	6.85	7.02	7.08	7.13	7.16	6.83
Lumber & Furniture	5.16	5.16	5.18	5.22	5.27	5.33	5.42	5.42	5.60	5.62	5.68	5.61	5.39
Stone, Clay & Glass	7.45	7.56	7.62	7.73	7.87	7.75	7.77	7.89	7.81	7.84	7.96	8.10	7.78
Primary Metals	6.57	6.66	6.63	6.69	6.65	6.72	6.75	6.69	6.57	6.61	6.68	6.78	6.67
Fabricated Metals	6.60	6.61	6.65	6.72	6.84	6.96	6.96	7.02	7.06	7.02	7.10	7.14	6.89
Machinery (exc. elec.)	6.59	6.65	6.70	6.79	6.80	6.78	6.82	6.92	7.04	7.16	7.22	7.23	6.89
Transportation Equip.	8.24	8.26	8.35	8.32	8.39	8.44	8.73	9.38	9.06	9.19	9.29	9.09	8.73
Instruments	6.82	6.86	6.89	6.87	6.89	6.88	6.92	6.99	7.06	7.24	7.24	7.38	7.00
Electrical Machinery*	5.97	5.97	6.08	6.11	6.28	6.05	6.04	6.27	6.52	6.56	6.54	6.62	6.25
Nondurable Goods	5.82	5.87	5.92	5.91	5.98	6.00	6.13	6.05	6.11	6.17	6.27	6.34	6.05
Food	6.41	6.34	6.50	6.62	6.98	6.73	6.85	6.79	6.52	6.60	6.97	6.96	6.69
Textiles	5.19	5.24	5.24	5.24	5.25	5.39	5.39	5.43	5.41	5.44	5.52	5.53	5.36
Apparel	4.82	4.83	4.84	4.92	4.86	4.91	5.02	4.97	5.00	5.11	5.08	5.16	4.96
Paper & Allied Prod.	6.37	6.43	6.47	6.48	6.39	6.41	6.47	6.56	6.72	6.74	6.83	6.87	6.56
Printing	6.92	7.10	7.17	7.31	7.23	7.32	7.40	7.32	7.36	7.43	7.52	7.60	7.31
Chemicals	7.46	7.66	7.63	7.55	7.51	7.69	7.77	7.75	8.07	8.03	8.38	8.16	7.81
Rubber	5.94	5.98	6.07	6.07	6.10	6.13	6.33	6.02	6.13	6.18	6.29	6.30	6.13
Leather	4.63	4.67	4.80	4.77	4.89	4.84	4.77	4.85	4.86	4.99	4.94	4.95	4.83

Source: Current Employment Survey

* Electrical Machinery not listed in correct SIC code order

Average Weekly Earnings
Manufacturing Production Workers
1980

Industry	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Annual Average
Manufacturing	$251.65	$250.34	$252.49	$253.92	$253.74	$255.12	$253.76	$257.15	$263.21	$262.64	$266.45	$274.57	$257.80
Durable Goods	272.00	269.28	269.06	272.69	271.35	272.28	269.05	276.74	285.01	285.32	288.77	297.14	277.30
Lumber & Furniture	200.21	195.05	192.18	196.79	198.68	204.67	210.84	207.04	210.00	211.31	213.57	213.74	204.82
Stone, Clay & Glass	303.96	301.64	304.80	314.61	321.10	313.88	308.47	310.08	307.71	311.25	305.66	321.57	310.42
Fabricated Metals	269.28	264.40	268.00	270.82	269.50	279.10	267.96	275.89	284.52	272.38	281.16	287.03	272.84
Machinery (exec. elec.)	280.73	275.98	278.72	284.50	282.88	286.12	278.26	290.64	299.20	298.57	303.96	311.61	289.38
Electrical Machinery	242.98	250.74	242.59	247.46	251.83	240.79	244.62	254.56	265.36	265.68	259.64	274.07	253.13
Transportation Equipment	335.37	322.14	327.32	326.98	322.18	340.13	338.72	358.32	365.12	357.49	363.24	372.69	343.96
Instruments	285.08	272.34	274.22	276.86	278.36	281.39	276.80	276.80	267.57	294.67	303.36	310.79	282.80
Primary Metals*	280.54	284.38	287.08	281.65	266.67	279.55	259.88	275.63	277.91	266.38	279.89	290.86	277.47
Nondurable Goods	225.23	225.41	229.70	228.13	228.44	231.00	234.17	231.72	235.85	232.61	236.38	243.46	231.72
Food	249.99	245.99	250.90	251.56	268.03	259.78	264.41	262.77	256.23	254.76	260.68	265.18	257.57
Textiles	211.23	213.27	219.56	214.32	211.05	219.37	211.29	218.82	218.56	212.16	216.94	222.86	216.01
Apparel	159.06	161.32	166.50	170.72	165.73	169.89	176.20	169.48	169.00	162.50	152.91	168.73	166.16
Paper & Allied Products	280.92	280.99	282.09	279.29	270.94	268.58	270.45	272.90	287.62	289.15	297.79	312.59	282.74
Printing	258.12	261.28	268.88	270.47	263.90	272.30	270.10	275.23	282.62	272.68	285.76	297.92	273.39
Chemicals	312.57	320.95	323.51	321.63	315.42	322.98	314.69	310.78	326.03	325.22	351.96	347.62	324.90
Rubber	241.76	239.80	246.44	244.62	242.78	241.52	255.10	245.62	246.43	245.35	252.86	259.56	247.04
Leather	168.53	169.52	170.40	--	178.00	179.08	165.52	173.63	176.90	178.64	175.86	175.23	173.88

Source: Current Employment Survey

* Primary Metals not listed in correct SIC code order

Job Bank Openings
by Occupational Category
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill*	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
TOTAL - ALL OCCUPATIONS	7,510	2,514	157	222	550	290	250	158	680	842	2,083
Professional, Technical, Managerial	992	457	8	7	43	38	32	25	150	103	146
Architect & Engineering	220	63	--	2	3	22	7	4	29	9	27
Math. & Physical Science	65	34	1	--	2	7	1	--	4	--	15
Life & Social Sciences	30	14	1	1	1	1	--	2	6	4	1
Medicine & Health	148	41	1	--	1	3	2	3	54	11	33
Education	44	18	--	1	12	--	1	--	18	2	4
Museum, Library	13	5	--	--	--	--	6	--	1	--	1
Law, Jurisprudence	4	3	--	--	--	--	--	--	--	1	--
Writing	10	3	1	--	--	--	--	--	3	--	2
Art	3	--	--	--	1	--	--	--	2	--	1
Entertainment	2	--	--	--	--	--	--	--	1	--	--
Administrative Spec.	121	63	--	--	14	4	7	3	7	18	11
Managers	266	164	4	1	11	1	5	11	18	15	45
Miscellaneous, Prof., Tech., Mgr.	62	10	--	2	4	--	2	2	7	34	5
Clerical Sales	2,131	938	34	29	123	53	35	17	81	249	629
Stenography, Typing & Related	699	417	9	8	43	27	11	4	35	39	122
Computing Acc't, Recor.	440	240	11	12	18	4	12	5	24	31	87
Prod. & Stock Clerk	129	36	--	4	35	8	2	--	2	15	48
Information Distr.	81	47	6	1	4	--	2	2	3	4	11
Misc. Clerical	49	25	--	2	2	--	--	--	3	9	6
Salespersons Services	29	3	2	2	1	--	--	2	5	4	19
Miscellaneous Sales	704	82	6	--	20	11	8	4	9	147	336

Job Bank Openings
by Occupational Category
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill*	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Service	1,399	320	16	22	68	60	27	20	200	166	492
Domestic Service	84	57	--	--	5	8	0	13	4	7	16
Food & Beverage Preparation	273	98	2	6	21	--	6	--	18	19	99
Protective Services	442	59	9	6	8	44	9	--	51	80	133
Building & Related	129	46	1	--	14	6	10	1	11	22	21
Other Service Occupations	471	60	4	10	20	2	--	6	116	31	223
Farming, Fishing, Forestry	209	38	5	--	2	--	11	0	45	26	69
Plant Farming	104	36	5	--	2	--	11	--	22	--	29
Animal Farming	5	1	--	--	--	--	--	--	--	1	2
Forestry	100	1	--	--	--	--	--	--	23	25	38
Processing	246	33	18	47	20	1	9	4	30	17	67
Ore Refining, Foundry	22	--	3	--	1	--	--	2	2	2	11
Food, Tobacco	32	10	--	3	1	--	--	2	2	1	11
Paper	1	--	--	--	--	--	--	--	--	1	--
Chemicals, Plastics, Synthetics	141	11	14	39	7	--	3	--	24	12	27
Stone, Clay, Glass	3	--	1	--	--	--	--	--	--	--	3
Leather & Textiles	23	2	--	5	10	--	6	--	2	1	3
Processing Occupations NEC	24	10	--	--	1	1	--	--	--	--	13

Job Bank Openings
by Occupational Category
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill*	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Machine Trades	602	138	17	34	67	24	34	31	41	69	184
Metal Machining	149	46	8	4	7	4	3	2	20	23	35
Metal Working NEC	80	19	--	--	24	3	--	--	1	11	36
Mechanics & Repair	150	43	3	6	8	14	9	4	9	18	41
Printing & Paperworking	33	4	--	--	9	--	2	7	7	3	5
Wood Machining	54	17	--	--	2	--	--	2	--	2	33
Textiles	51	3	6	7	6	--	20	1	--	9	3
Machine Trades NEC	85	6	--	17	11	3	--	15	4	3	31
Benchwork	702	158	45	27	72	47	66	36	63	60	176
Metal Products	131	64	--	4	1	--	6	--	3	7	47
Scientific & Electrical Equipment	242	45	--	1	24	33	54	25	31	6	39
Plastics, Synthetic Rubber	10	2	--	2	4	--	--	1	--	--	2
Stone & Wood Products	20	4	--	--	2	--	--	1	--	--	12
Textile, Leather	249	40	45	12	34	8	5	9	24	40	55
Benchwork Occupations	50	5	--	8	11	6	1	--	5	7	23
Structural	605	241	10	17	42	34	15	17	38	50	157
Metal Fabrication	125	77	3	5	12	13	1	2	4	2	16
Welders	69	23	--	--	9	--	--	0	10	2	29
Electrical	76	34	1	1	4	4	3	1	12	6	13

Job Bank Openings
by Occupational Category
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill*	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Structural (continued)											
Painting	33	10	1	--	5	8	2	4	1	3	2
Excavating, Grading etc.	25	20	--	--	--	1	--	1	--	--	2
Construction NEC	243	72	4	11	9	6	5	8	8	30	84
Structural Occupations NEC	34	5	1	--	3	2	4	1	3	7	11
Miscellaneous	624	191	4	39	113	33	21	8	32	102	163
Motor Freight Occupations	76	32	--	7	13	1	1	2	--	14	13
Transportation Occupations	70	30	--	--	--	--	10	2	1	3	24
Packing, Material Handling	439	126	4	30	99	30	8	3	20	82	111
Production Distribution of Utilities	14	1	--	2	--	--	--	1	7	1	2
Graphic Art Work	20	2	--	--	1	--	1	--	4	2	11
Other	5	--	--	--	--	2	1	--	--	--	2

* Lawrence/Haverhill data for February

Source: Job Bank - March 1981

NEC: Not elsewhere classified

Average Pay by Occupational Category
Massachusetts Job Banks
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill 1/	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
TOTAL - ALL OCCUPATIONS	$ 9,576	$10,413	$ 8,347	$ 8,896	$ 9,378	$10,068	$ 8,842	$ 9,520	$10,289	$ 8,826	$ 8,896
Prof., Tech., Managerial 2/	14,844	16,286	15,149	13,029	12,807	18,307	11,292	11,627	14,099	11,826	13,711
Architect & Engineering	18,729	20,294	--	16,200	13,440	18,075	13,294	19,500	18,008	17,843	15,737
Math. & Physical Science	19,112	20,256	16,000	--	17,304	23,563	10,400	--	18,269	--	16,960
Life & Social Sciences	13,078	15,057	13,165	10,600	10,500	9,000	--	9,758	12,850	9,416	14,500
Medicine & Health	12,749	12,983	10,400	--	10,000	12,827	11,660	12,480	13,171	12.209	12,086
Education	12,549	12,860	--	9,000	11,100	--	9,500	--	12,123	9,640	16,169
Museum, Library	9,752	11,494	--	--	--	--	7,800	--	10,625	--	11,878
Law Jurisprudence	15,103	15,804	--	--	--	--	--	--	--	13,000	--
Writing	14,346	18,152	7,662	--	--	--	--	--	13,000	--	14,000
Art	11,000	--	--	--	16,916	--	--	--	10,400	--	12,200
Entertainment	12,480	--	--	--	--	--	--	--	13,000	--	--
Admin. Spec.	14,087	15,398	--	--	12,980	--	10,610	11,573	13,712	12,940	14,202
Managers	14,293	15,053	18,492	11,700	13,099	--	14,140	10,831	14,271	13,266	12,451
Misc., Prof., Tech.,	9,662	12,375	--	13,750	13,966	--	10,000	8,800	11,763	7,679	13,348
Clerical Sales 2/	8,211	8,544	7,819	8,215	8,713	8,433	8,032	8,459	8,774	7,798	7,774
Steno., Typing & Related	8,634	8,721	8,138	7,852	9,082	8,975	7,940	8,751	8,378	8,109	8,742
Computing Acc't., Recor.	8,169	8,255	7,592	8,508	9,328	8,294	8,080	8,216	8,138	7,846	8,013
Prod. & Stock Clerk	8,430	9,104	--	8,320	8,109	8,832	12,640	--	7,984	8,525	7,540
Information Distr.	8,430	8,800	7,696	7,800	7,722	--	7,124	6,968	7,281	10,184	7,667
Miscellaneous Clerical	8,920	8,726	--	8,108	8,060	7,973	--	--	8,533	8,706	11,272
Salespersons Services	12,778	18,867	10,400	--	15,600	--	--	--	10,400	--	12,682
Miscellaneous Sales	7,549	8,143	7,072	8,020	8,343	7,233	7,163	8,963	11,856	7,518	7,089

Average Pay by Occupational Category
Massachusetts Job Banks
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill 1/	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Service 3/	$ 3.94	$ 3.94	$ 3.42	$ 3.39	$ 3.87	$ 3.55	$ 4.32	$3.43	$ 4.12	$ 4.00	$3.91
Domestic	3.49	3.50	--	--	3.50	--	--	--	3.35	3.50	3.48
Food & Beverage Preparation	4.05	4.07	3.35	3.35	3.88	3.84	5.35	3.35	4.19	3.84	4.16
Protective Services	3.95	3.92	3.37	3.48	4.05	3.49	4.41	--	4.31	4.12	3.83
Building & Related Prods.	3.91	4.15	3.75	--	4.18	3.54	3.81	4.12	3.86	3.74	3.84
Other Service Occupations	3.95	4.00	3.48	3.35	3.66	3.75	3.43	3.47	4.07	4.05	3.91
Farming, Fishing, Forestry 3/	4.13	4.39	3.50	--	4.50	--	4.33	--	4.04	3.40	4.02
Plant Farming	3.92	4.37	3.50	--	4.50	--	4.33	--	3.59	--	3.54
Animal Farming	3.95	4.00	--	--	--	--	--	--	--	3.40	4.18
Forestry	4.43	5.50	--	--	--	--	--	--	4.46	--	4.37
Processing 3/	4.24	4.12	3.80	4.00	4.36	5.00	4.75	3.43	5.44	4.47	3.95
Ore Refining, Foundry	4.07	--	4.00	--	3.50	--	--	3.50	5.43	4.00	3.81
Food, Tobacco	3.96	3.91	--	4.67	4.00	5.00	--	3.35	4.18	3.75	3.88
Paper	3.50	--	--	--	--	--	--	--	--	3.50	--
Chem., Plastic, Synthetic	4.37	3.95	3.70	3.95	5.27	--	3.75	--	5.65	4.75	4.11
Stone, Clay, Glass	4.21	--	4.64	--	--	--	--	--	--	--	4.00
Leather & Textiles	4.30	4.50	--	4.00	3.87	--	5.25	--	4.20	3.75	3.55
Processing Occup. NEC	4.11	4.45	--	--	4.00	--	--	--	--	--	3.85
Machine Trades 3/	5.05	5.70	4.04	4.02	4.60	5.34	5.00	5.18	5.32	4.86	4.88
Metal Machining	5.73	6.12	4.30	5.30	6.36	5.63	6.75	5.20	5.62	5.21	5.94
Metal Working NEC	4.49	4.39	--	--	4.15	4.42	--	--	3.80	4.43	4.55
Mechanics & Repair	5.41	5.48	4.33	5.19	6.08	5.64	4.67	4.69	4.93	4.83	5.92

Average Pay by Occupational Category
Massachusetts Job Banks
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill 1/	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Printing & Paperworking	$ 4.51	$ 5.25	$ --	$ --	$ 4.05	$ 4.35	$ 5.00	$ 4.64	$ 4.91	$ 3.86	$ 3.90
Wood Machining	5.07	7.32	--	--	3.75	--	--	4.50	--	4.25	4.00
Textiles	4.34	3.40	3.55	3.35	4.25	4.88	4.89	3.50	--	4.83	3.78
Machine Trades NEC	4.37	5.02	--	3.51	4.19	--	--	5.76	5.85	5.54	3.88
Benchwork 3/											
Scientific & Elect. Equipment	3.97	4.50	--	6.00	3.89	3.82	3.42	4.35	3.48	3.44	4.50
Stone & Wood Products	3.68	4.25	--	3.75	3.35	--	--	3.50	--	--	3.50
Textile, Leather	3.67	3.76	3.79	3.43	4.19	3.98	4.25	3.47	3.41	3.60	3.66
Metal Products	3.59	3.40	--	3.55	6.00	--	3.42	---	3.57	3.61	3.86
Other Benchwork Occupations	4.71	4.70	--	3.73	4.02	4.92	4.00	3.50	4.00	4.03	3.68
Structural 3/	5.45	5.81	4.95	4.93	6.62	5.60	4.52	5.24	6.31	4.66	5.11
Metal Fabrication	5.77	5.86	4.99	4.27	7.60	6.42	5.76	4.00	7.87	5.00	5.09
Welders	5.58	5.78	--	--	6.25	--	--	--	6.30	5.00	5.13
Electrical	5.71	6.18	5.00	3.50	6.93	4.56	6.08	8.18	5.26	5.77	5.20
Painting	5.78	7.27	7.00	--	4.35	4.88	4.00	5.00	5.00	7.00	5.00
Excavating, Grading etc.	5.00	4.50	--	--	--	6.00	--	7.00	--	--	7.00
Construction NEC	5.31	5.82	4.75	5.36	7.33	5.78	4.05	5.05	7.59	4.33	5.16
Structural Occupations NEC	4.37	4.77	3.50	--	5.00	4.50	3.90	5.50	5.46	3.96	4.28

Average Pay by Occupational Category
Massachusetts Job Banks
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill 1/	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Miscellaneous 3/	$ 4.38	$ 4.16	$ 3.45	$ 3.96	$ 4.06	$ 4.19	$ 3.73	$ 4.38	$ 4.91	$ 4.11	$ 4.47
Motor Freight	4.78	5.06	--	3.96	4.04	5.75	3.35	3.75	--	4.57	5.48
Transportation Occup. NEC	4.41	4.21	--	--	--	--	3.73	3.35	3.50	3.65	5.18
Packaging, Materials Handling	4.00	3.87	3.45	3.68	4.07	4.15	3.71	5.08	4.16	4.01	4.16
Prod. Distrib. of Utilities	7.11	8.34	--	8.17	--	--	--	5.62	7.78	5.79	4.50
Graphic Art Work	4.27	5.06	--	--	4.00	--	4.38	--	4.01	4.68	4.14
Other	5.75	--	--	--	--	4.00	3.75	--	--	--	8.50

1/ Lawrence/Haverhill data for February

2/ Average yearly salary

3/ Average Hourly pay

Source: Job Bank - March 1981

NEC: Not elsewhere classified

Massachusetts Community Colleges

Berkshire Community College	Pittsfield
Bristol Community College	Fall River
Bunker Hill Community College	Charlestown (Boston)
Cape Cod Community College	West Barnstable
Greenfield Community College	Greenfield
Holyoke Community College	Holyoke
Massachusetts Bay Community College	Wellesley Hills
Massasoit Community College	Brockton
Middlesex Community College	Bedford
Mount Wachusett Community College	Gardner
Northern Essex Community College	Haverhill
North Shore Community College	Beverly
Quinsigamond Community College	Worcester
Roxbury Community College	Roxbury (Boston)
Springfield Technical Community College	Springfield

Prepared March 1981

CAREER

No. Name of Program	HEGIS NO.	Berkshire	Bristol	Bunker Hill	Cape Cod	Greenfield	Holyoke	Mass. Bay	Massasoit	Middlesex	Mt. Wachusett	North Shore	Northern Essex	Quinsigamond	Roxbury	Springfield
BUSINESS	5001.															
1. Administrative Assistant	5001.											● 2	● 3			
2. Administrative Assistant — Education	5001.												● 3			
3. Banking and Finance	5001.						● 3						● 3			● 2
4. General Business	5001.	● 2	● 2					● 2	● 2	● 2	● 2	● 2				● 2
5. Business Technology	5001.										● 2			● 2		
ACCOUNTING	5002.															
6. Accounting Associate	5002.	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2
AGRICULTURAL BUSINESS	5402.01											● **				
7. Agricultural Industries	5402.01															
8. Arboriculture	5402.02							● 2								
AGRICULTURE TECHNOLOGIES	5402.03															
9. Floriculture	5402.03											● **				
10. Garden Center Management	5402.04															
11. Horicultural Commodities	5402.08											● **				
12. Horticulture	5402.							● 2								
13. Landscape Technology	5402.05							● 2								● 2
14. Natural Resources Management	5401.						● 1					● **				
15. Nursery Management	5402.06							● 2								

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16. Turf Management	5402.08											●**				
DATA PROCESSING	5101.															
17. Business Data Processing	5101.	●^{1}			●^{2}	●^{2}		●^{2}	●^{2}		●^{2}	●^{2}		●^{1}		●^{2}
18. Computer Programming	5103.		●^{1}				●^{2}	●^{2}					●^{2}			●^{2}
19. Key Punch Operator (1 yr)	5103.002															
HOTEL-MOTEL AND FOOD SERVICE	5010.	●^{1}		●^{2}	●^{2}		●^{1}									
20. Culinary Arts	5404.1						●^{3}					●**				
21. Food Science & Nutrition							●^{1}					●**				
22. Food Service Management	5404.03												●^{1}			
MANAGEMENT	5004.															
23. Building & Plant Management	5004.			●^{3}												
24. Business Management	5004.		●^{2}			●^{2}	●^{2}		●^{2}	●^{2}	●^{2}	●^{2}	●^{2}	●^{2}		●^{2}
25. Industrial Management	5004.02								●^{2}		●^{2}					
26. Nursing Home Management	5218.							●^{3}								
27. Office Management							●^{1}				●^{2}					
28. Retail Food Distribution Management	5404.04											●**				
29. Small Business Management	5004.03							●^{2}								●^{1}
30. Retail Management				●^{2}			●^{1}	●^{2}		●^{2}				●^{2}	●^{1}	
31. General Management					●^{2}			●^{2}		●^{2}	●^{2}			●^{2}	●^{2}	●^{2}

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MARKETING																
32. Fashion Merchandising	5004.05									● 1		● **				
33. Insurance	5004.06			● 2								● 2				
34. Marketing	5004.07		● 2			● 3			● 2	● 2	● 2	● 2				● 2
35. Real Estate	5004.08			● 2				● 2				● 2				
36. Retailing	5004.09				● 2					● 2	● 2					
MEDIA TECHNOLOGY						● 1										
37. Commercial Art	5012.01	● 1														
38 Electronic Media-Production Technician (TV)	5008.															● 1
39. Radio Technician	5310.															
40. Telecommunications Technician	5310.02															● 1
41. Public Communications Technology	5008.										● 1					● 1
GRAPHIC & VISUAL COMMUNICATION	5012															● 2
42. Design & Illustration	5012.02			● 1		● 1										
43 Graphic Arts (Commercial Art) Technology																
44. Journalism	5012.		● 1													
45. Photography & Media Production	5006.02															
46. Printing Management	5007.			● 1												● 2
OFFICE EDUCATION	5009.															

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47. Court Reporting	5005.03							● 2								● 1
48. Office Assistant (1 yr)	5005.04					● 1			● 2	● 3	● 2	● 2				● 1
49. Administrative Services Management (1 yr)							● 1									
50. Office Services											● 2					
SECRETARIAL																
51. Administrative — Word Processing												● 2				
52. Bilingual (1 yr)	5005.11		● 3	● 1												● 1
53. Executive	5005.12	● 1	● 2	● 2	● 2	● 1	● 2	● 1	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 1
54. General	5005.13							● 3	● 2	● 2	● 2			● 3		● 3
55. Legal	5005.14		● 2	● 2	● 2	● 1	● 2	● 1		● 2	● 2	● 2	● 2		● 1	● 1
56. Medical	5005.15		● 2	● 1	● 2	● 1	● 2	● 1		● 2	● 2	● 2	● 2		● 1	● 1
57. Statistical	5005.16												● 2			
58. Technical	5005.17							● 1					● 1			● 1
TRANSPORTATION																
59. Aviation Science	5302.											● 2				
60. Air Transportation	5011.01			● 1												
61. Mass (urban) Transportation	5011.02			● 1												
62. Motor Freight (Rail/Truck)	5011.03			● 1												
ENGINEERING	5301.															

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63. Architectural Technology																● 2
64. Building & Plant Management																
65. Construction & Building																
66. Interior Design				● 3												
67. Kitchen Design																
68. Heating Power & Air Conditioning																● 2
69. Civil Technologies	5309.		● 1			● 1							● 1			● 2
70. Land Surveying	5309.		● 1													
71. Drafting Assistant (1 yr)	5304		● 1						● 1							
72. Electro-Mechanical Drafting (1 yr)										● 1						
73. Chemical Technology	5305.															
ELECTRONIC TECHNOLOGIES																
74. Electro-Mechanical Technology	5311.		● 2						● 2		● 2	● 2				● 1
75. Cable TV Technician	5008.															
76. Computer Maintenance & Service Technician																● 1
77. Electrical Repair & Maintenance Assistant	5310.															
78. Electrical Technology	5310		● 2													● 2
79. Electronic Benchwork Technician	5310.															● 1
80. Electronic Engineering Assistant	5310.	● 1														

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81. Electronic Technology	5310.	● 1					● 2		● 2	● 1	● 2		● 2	● 1	● 1	● 2
82. Laser Electro-Optics Technology	5399.															● 1
83. Two-way Radio Technician																
INSTRUMENTATION TECHNOLOGY																
84. Bio-Chemical Technician	5314.															
85. Bio-Medical Technician	5314.															● 1
MECHANICAL TECHNOLOGIES	5301.															
86. Advanced Metal Machinery Technology																● 2
87. Automotive Technology	5306.									● 1	● 2					● 1
88. Engineering Technology	5301.						● 1				● 2					
89. Industrial Technology	5312.					● 3										● 1
90. Manufacturing Engineering	5301.											● 3				
91. Machine & Tool Design Technology	5303.															● 2
92. Mechanical Engineering	5301.		● 1								● 2					
93. Mold Making (Mechanical Technology)	5301.	● 1														
94. Plant Engineering												●				
95. Quality Control (1 yr)																
HEALTH																
96. Dental Technologies																

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97. Dental Assistant (1 yr)	5202.									●[1]						●[1]
98. Dental Hygiene	5203.		●[1]		○[1]					●[1]				●[1]		●[1]
99. Dental Laboratory Technology	5204.								●[1]	●[1]						
100. Air Quality	5408.01															●[1]
101. Conservation Technology	5499.											●**				
102. Environmental Technology	5408.02		●[2]				●[1]						●[1]	●[3]		○[1]
103. Pest Control	5408.03															○[1]
104. Public Environmental Health Technician	5408.04											●[3]		●[3]		
105. Solid Waste Disposal	5408.05															●[1]
106. Water Quality	5408.07															●[1]
107. Medical Laboratory Technician			○[1]					●[1]		●[1]						●[1]
MEDICAL RECORDS TECHNOLOGY	5213.															
108. Medical Transcriptionist	5214.02				●[3]			○[3]	○[2]			●[2]				
109. Medical Records Technology	5213.						●[1]	○[2]					○[1]			
NURSING																
110. Nurse Assistant (1 yr.)(LPN)	5209.01															
111. Nurse Education (RN)	5208.	○[1]	○[1]	○[1]	○[1]	○[1]	●[1]	○[1]	○[1]	●[1]	○[1]	○[1]	●[2]	●[1]		●[2]
112. RADIOLOGIC TECHNOLOGIES																
113. Nuclear Medical Technician	5207.01			○[1]												○[1]

CAREER

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114.	Radiologic Technology	5207.03			● 1			● 1	●		● 1		● 1	● 1	● 1		● 1
115.	Radiation Therapy	5207.02															● 1
116.	Diagnostic Medical Sonography (Ultrasound Tech)	5207.04									● 1						● 1
	REHABILITATION TECHNOLOGIES																
117.	Occupational Therapy Assistant	5210.											● 1		● 2		
118.	Physical Therapy Assistant	5219.											● 1				● 1
119.	Respiratory Theraphy	5215.								● 1			● 1	● 1	● 1		● 1
120.	EMERGENCY MEDICAL TECHNOLOGY I (81 hour course)			● 3	● 2	● 3	● 3	● 2		● 3	● 3	● 1	● 2		● 3		● 3
121.	ANIMAL SCIENCE TECHNOLOGY	5206.						● 1					● **				
122.	FOOD SCIENCE & NUTRITION/ DIETETIC TECHNOLOGY							● 1					● **	● 1			
123.	MEDICAL ASSISTANT	5214.01									● 1						●
124.	PEDIATRIC ASSISTANT (1 yr)	5299.02															
125.	PUBLIC HEALTH TECHNICIAN	5408.											● 3				
126.	HEALTH CARE FACILITY ACTIVITIES DIRECTOR	5506.01			● 3									● 1			
127.	HEALTH CARE FACILITIES MANAGEMENT							● 3									
	SERVICES																
128.	General Human Services (w/concentrations of 9 & 18 credit hours in the listed areas)	5506.02	● 1		● 2							● 2					
129.	Geriatric Associate	5299.04	● 1														

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130.	Youth Services Associate		● 1														
131.	Social Service Associate	5506.04	● 1														
132.	Child Care			● 1								● 2					
133.	Children with special needs											● 2					
134.	Probation											● 2					
135.	Public Administration	5508.01										● 2					
136.	Social Welfare											● 2					
	HUMAN SERVICES WITH OPTIONS																
137.	Cosmetology Management	5006.01															
138.	Cosmetology Assistant (1 yr)	5006.02															● 1
139.	Early Childhood Education		● 1				● 1	● 1	● 2				● 2	● 1	● 1	● 2	● 2
140.	Early Childhood Education (1 yr)	5503.01									● 3						
141.	Drug & Alcoholic Rehabilitation	5299.03											● 3				
142.	Educational Assistant	5503.03												● 3			
143.	Geriatric Associate	5299.04	● 1			● 3								● 2	● 3		
144.	Mental Health Associate	5216.01	● 1	● 3							● 1	● 2	● 2	● 1			● 1
145.	Social Service Associate	5506.04								● 2			● 3				
146.	Social Work Associate (1 yr)	5506.05									● 3						
147.	Legal Assistant										● 3						

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148. Recreation Leadership	5506.03	● 1				● 1		● 1								
149. Educational Assistant (language Communication Opt)													● 3			
SPECIAL EDUCATION																
150. Language Communication Assistant													● 3			
151. Deafness Communication													● 2			
LEARNING RESOURCES CENTER TECHNOLOGIES																
152. Audio-Visual (Media Technology)	5504.01															
153. Library Assistant (1 yr)	5504.03		● 1													
154. Library Associate	5504.02		● 2													
PROTECTIVE SERVICES ADMINISTRATION	5504.03															
155. Conservation Law Enforcement																
156. Corrections	5505.02						● 2					● 2				
157. Criminal Justice	5505.01	● 3		● 2	● 2											
158. Law Enforcement	5505.03		● 2			● 1	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 3		● 2
159. Occupational Safety & Health Technology	5599.01											● 3				● 1
160. Security Administration	5599.02												● 2			
161. Fire Protection & Safety Technology	5507.	● 3	● 3	● 2	● 3	● 3		● 3	● 3	● 3	● 3	●	● 3	● 3		● 2
PUBLIC ADMINISTRATION																
162. Community Planning & Development	5508.01															

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163. Federal Government	5508.02							● 3								
164. Local Government	5508.04															
165. Public Administration	5508.05											● 3				
166. State Government	5508.06															
167. Urban Studies	5508.07						● 1									
168 Land Use Planning	5508.03															
169. Labor Studies				● 3												
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No. Name of Program	HEGIS NO.	Berkshire	Bristol	Bunker Hill	Cape Cod	Greenfield	Holyoke	Mass. Bay	Massasoit	Middlesex	Mt. Wachusett	North Shore	Northern Essex	Quinsigamond	Roxbury	Springfield
BUSINESS	5600	●	● 2	● 2	● 2	●	● 2	● 2	● 2	● 2	● 2	● 2	● 2	●	● 2	● 2
Business Education			● 2				● 2	● 2		● 2	● 2					
Education	5610.		● 2		● 2		● 2								● 2	● 1
Engineering	5620.	● 1	● 1		● 2	● 1	● 1						● 1	● 1		● 1
Fine Arts— Visual & Graphic Arts	5630.	● 1				● 1	● 1				● 2					
Liberal Arts	5640	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2		● 2
Liberal Arts— Data Processing Concentration						● 1										
Science	5650.				● 2		● 1								● 2	● 1
Physical Education (& Athletic Training Option)		● 1														
Liberal Studies/General Studies		● 2					● 2		● 2	● 2	● 2	● 2			● 2	● 2
Library Science			● 2													
Pre-Professionals			● 2				● 1				●					
English															● 2	
Social Science															● 2	
Theater Arts		● 1									● 2					
Secretarial Science			● 3										● 2			
Music Education							● 1									

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